Watch, Warning, Advisory Application (WWA)

August 21, 2003

WWA AWIPS OB2 Users Manual

Office of Science and Technology
Meteorological Development Laboratory
Decision Assistance Branch

TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

1. GENERAL OVERVIEW

Watch, Warning, Advisory (WWA) is an AWIPS application designed to support mission critical dissemination of National Weather Service (NWS) watch, warning, and advisory forecast products. This manual is intended to deliver an overview of the WWA application as well as configuration steps and user instructions to effectively operated this application. Questions can be addressed to the Meteorological Development Laboratory's (MDL) customer representative listed in section 4.2 of this document.

1.1. WWA Client

The WWA Geographical Viewer, or GeoViewer as it's typically called, along with the WWA Composer and WWA Monitor collectively makeup the primary WWA client interfaces, used operationally to generate watch, warning, and advisory products. This section breaks down each interface, provides a description of related functionality, and specific details on options available to assist in the product generation process.

1.1.1. WWA Geographical Viewer (GeoViewer)
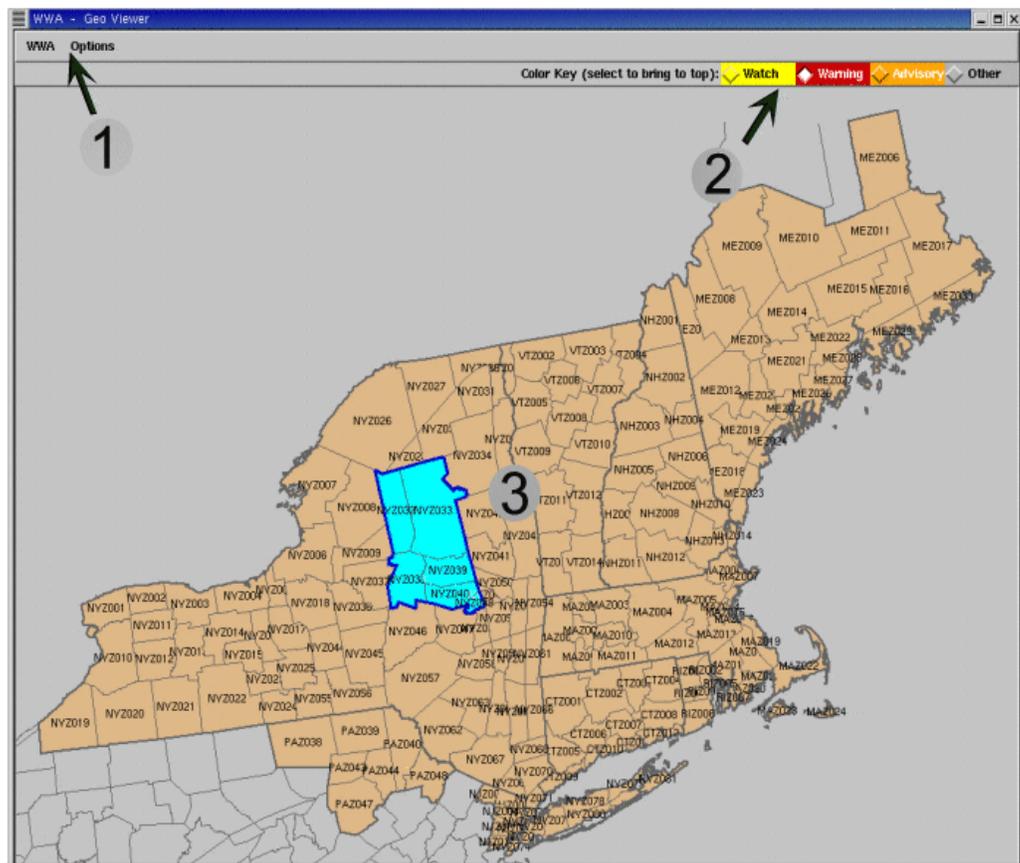
Figure 1 - WWA Geographical Viewer (WWA GeoViewer) Interface

The WWA GeoViewer provides selectable county, zone, marine, and fire weather maps to graphically identify areas of interest when generating watch, warning, and advisory products. A secondary function displays all active watches, warnings, and advisories issued by the local and surrounding WFOs, also known as intersite coordination.

Figure 1, location 1, denotes a standard menu bar containing the following options:

WWA: Menu option that contains the functions: *New*, *Monitor*, *Close*, and *Exit,* providing tools to manage WWA interfaces.

   New: Open the WWA Composer.

   Monitor: Open the WWA Monitor.

   Close: Close the WWA Geo-Viewer.

   Exit: Exit the WWA application.

Options: Menu option that affects the geographical viewing area of the GeoViewer though functions like zoom, font selections, map toggles, and toggles between map overlays.

   Zoom in/out: This radio button provides a one level zoom, in and out, from the center point of the displayed map.

   Zone, County, Fire Map: This radio button was provided to manually switch between zone, county, and fire weather map backgrounds. During the actual product generation process the correct map background will automatically display based on the requirements of the selected hazard. Finally, marine zones are supported and are tied to the land based zone background.

   Shifting Outlines: Shift county/zone outlines for multiple hazards.

   Topography: Check button to activate/deactivate topographical symbols of local terrain on GeoViewer map.

   UGC's: Check button to display UGC values for county map background.

   Names: Check button to display zone or county names on associated map background.

   Topography Levels: Independent users interface to set local topography levels as needed - See figure 2.

   Font: Menu option presents a cascading menu to three way radio buttons that change map overlays such as UGC's and Names to small, medium, and Large sizes.
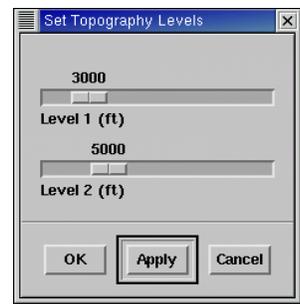
Figure 2 - GeoViewer Topography Levels Interface

The second identifier in the figure 1 GeoViewer example represents watch, warning, advisory, and other filters color coded yellow, red, orange, grey respectively. Because multiple WWA products can be active for the geographical area, this four way toggle was added to help filter active products during complex weather situations. Another filtered display is provided by moving the mouse over a county or zone of interest and then holding the center mouse button down. Doing this will display a list of active products along with the associated expiration times.

Identifier 3, figure 1, represents the viewable GeoViewer map. Not shown in this example is the additional popup menu displayed with a right mouse click. Options presented from this menu are:

Restore Original Selection: Option to restore previous zone/county selections from a selected WWA Monitor product.

Select IFPS Zone Forecast Combo: Selects zone/county groups as defined by local IFPS.

Deselect IPFS Zone Forecast Combo: Deselects zone/county groups as defined by local IFPS.

Select Region (<Region>): Selects all zone or county locations of listed region, within valid CWA.

Deselect Region: Deselects all zone or county locations of associated region.

Select Region (<State>): Selects all zone or county locations of listed state, within valid CWA.

Deselect State: Deselects any selected zone or county located in the listed state.

Select All: Selects all zones or counties within WFO CWA.

Deselect All: Deselects any selected zone/county in GeoViewer map.

1.1.2.   **WWA Composer**

The WWA Composer interface provides necessary parameters needed in the product generation process which includes the selection of mode, hazard type, time fields, free text editing, call-to-action statements and more. This interface can be broken down into six major sections as identified in figure 3.

As new OB2 functionality was added, interface space became limited and because of this a menu bar (1) was developed into the WWA Composer. As part of the WWA self-contained model some menu options were provided, but grayed out (unselectable) until development is complete. Below is a list of each item found in the WWA Composer menu bar, **black** for active and grey for inactive functions:

File: Menu option that contains a *Close* function to exit the WWA composer interface. This functionality echos the *Close* button found on the bottom right of the composer interface.

Options: Menu selection to assist the product generation process.

Forecaster: This function launches a separate user interface providing a selectable list of predefined forecaster identification, which are appended to the end of issued products. Default setting is "off" or no selection.

Headline Editor?: This checkbox activates a headline editor to edit standardized headlines before transmitting.

Mode: This cascading menu contains a toggle between *Active*, *Practice*, *Test*, and *Proposed* modes. Each selected state maintains its setting until altered by the forecaster or reset to the default, *Active,* setting upon client startup.

> **Active**: Default and operational setting.

> **Practice**: A function to generate WWA products without actually disseminating publically.

> **Test**: Sets the WWA application to work exactly like the active function with the word "TEST" strategically placed in the final product. Products will disseminate publically.

> **Proposed**: Setting used as an intersite coordination tool. Not used for public dissemination.

Tone Alert: Selection that cascades into a *Yes*, *No*, *Default* toggle where selecting *Yes* will tone alert the generated product on NWR, *No* will not tone alert on NWR, and *Default* will tone based on the CRS configuration setting of the generated product.

Figure 3 - WWA Composer Interface

Site: Shows which site the WWA application is configured for.

Reset: Cascading menu into various reset functions described below.

> **All**: Resets the following: overview/synopsis & descriptive text fields, GeoViewer, time functions, tone alert, bullets, headlines, and hazard menu selections to the default settings.

> **Times**: Resets the beginning, duration, and expiration time fields located on the WWA composer to the default values.

> **Geography**: Resets any selected zone/county fields located in the active GeoViewer map to the default setting.

> **Bullets**: Resets any selected bullets located on the WWA composer interface to the default setting.

Help: Menu function with access to WWA help options.

> **Help Menu**: Inactive function until defined

The Composer presents a nationally supported selectable list of hazard types (2) in a cascading menu. The existence of products listed are nationally supported to ensure database integrity, however local settings of each product remains the responsibility of the WFO. For more information on how to configure WWA

reference section 2 of this document along with the WWA Admin Users Manual referenced in section 4.2 For a complete list hazard types reference section 1.10.

Generated WWA products require four unique time fields (3) defined by the forecaster during the preparation process. These time fields are:

Begins: Hazard start time. By default the current time.

Duration: Hazard end time. Setting this time field whether through the provided 3hr, 6hr, 12hr, 24hr buttons or through the entry box will automatically adjust the *Expires* and *ProdExp* time fields.

Expires: Hazard termination time.

ProdExp: WWA product expiration time. IE, the purge time in the UGC string.

Many NWS products require forecaster free text input consisting of Overview/Synopsis and/or Descriptive Text. This dynamic text is entered into appropriate Free Text Editor (FTE) launched from the Overview/Synopsis and Descriptive Text buttons from the Composer interface (4). For more information on the FTE or capturing free text reference section 1.1.4. of this document.

Optional Bullets or commonly addressed as Call-to-Action Statements and are presented to the forecaster in a multi-selectable list box (5). Bullet definitions are retrieved from WWA associated template files predefined by the WWA Administrator.

Finally, the ability to transmit, store, reset, or backout from the WWA composer can be found on the interfaces button bar (6). Four options are provided:

Transmit: Launch WWA Transmit interface, last view before dissemination.

Save Only: Save defined segment to WWA Monitor. Typically done as part of multi-segmented product generation.

Restart: Reset the current WWA Composer & GeoViewer to default settings.

Close: Close the WWA Composer interface.

1.1.3.   WWA Monitor

The WWA Monitor serves as a product tracking tool to manage life cycle states for the local office and issued products display for adjacent WFOs using the WWA application. This interface can be broken down into three major sections as shown in figure 4. Section 1 represents the menu bar that contains the following options:
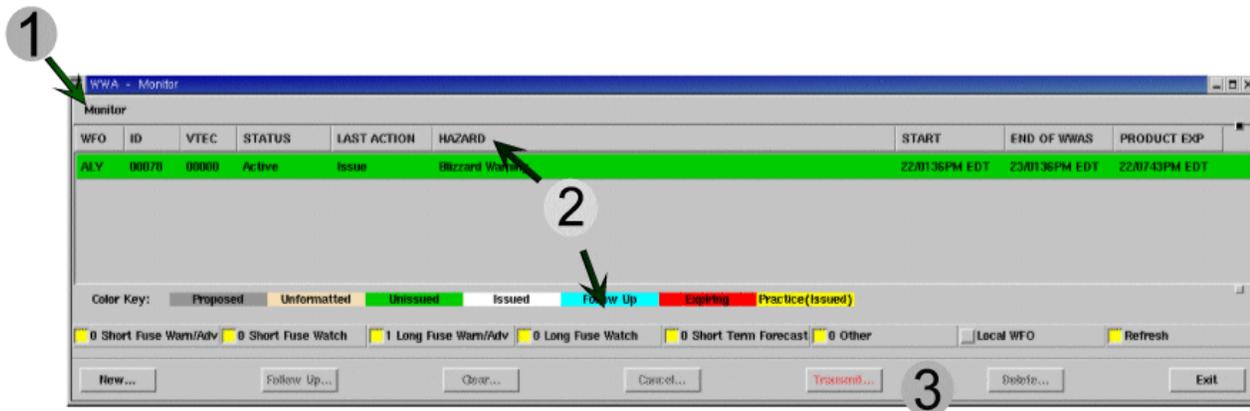
Figure 4 - WWA Monitor Interface

Monitor: Menu option that contains the functions: *New*, *GeoViewer*, *Close*, and *Exit,* providing tools to manage WWA interfaces.

> **New**: Open the WWA Composer.
>
> **GeoViewer**: Open the WWA GeoViewer.
>
> **Close**: Close the WWA Monitor.
>
> **Exit**: Exit the WWA application.

The next section (2) provides a titled list box of each product/segment catalogued along with the appropriate color code denoting the life cycle state. Selecting each title will sort the listed items by the selected type. Each product listed contains details as defined below:

WFO: Three letter site id (EG, ALY)

ID: Internal WWA identification number

VTEC: Valid Time Event Code (VTEC) Event Tracking Number (ETN) number (SPC watch # for WCN, or sequential hazard counter local to WFO).

STATUS: Lists the current life cycle state of the WWA product.

LAST ACTION: Indicates last product life cycle action of WWA product. Life cycle states include: Proposed, unformatted, unissued, issued, followup, expiring, practice(issued).

HAZARD: Indicates the hazard type as selected from the WWA Composer hazard menu when created.

START: Indicates the hazard start time as defined by the forecaster through the WWA Composer.

END OF WWAS: Indicates the product expiration time as defined by the forecaster through the WWA Composer.

PRODUCT EXP: Indicates the product purge time from the WWA application as defined by the forecaster from the WWA Composer. This may or may not be the same time as the END OF WWAS field described above.

Hazards listed in the WWA Monitor can be filtered by selecting the any of the following check boxes: Short Fuse Warn/Adv, Short Fuse Watch, Long Fuse Warn/Adv, Long Fuse Watch, Short Term Forecast, Other, Local WFO., Refresh (activate auto refresh option).

Section 3 identifies the WWA Monitor button bar which breaks down as follows:

New...:   Open the WWA Composer to begin generation of a new WWA Product.

Follow up...: Provides access to follow up issued WWA products for: extension in time, extension in area.

Clear...: Provides access to clear zone or county from an issued WWA product.

Cancel...: Option to cancel an issued WWA product.

Transmit...: Option to publically transmit a single (or collective) segment(s) listed in the WWA monitor.

Delete... Option to delete unissued products from the WWA Monitor or revert back to the previously issued state.

Exit: Exit the WWA application.

1.1.4.   Capture Text and Free Text Editor
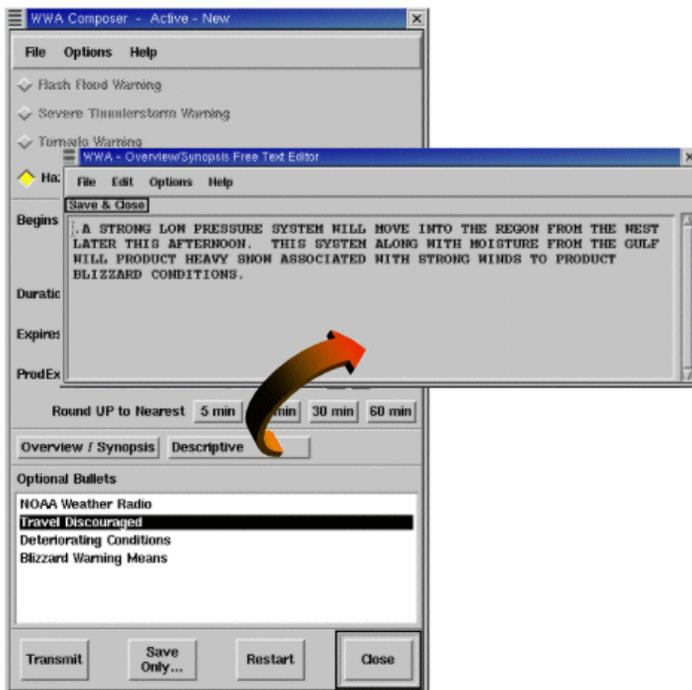
Figure 5 - Free Text Editor (FTE) launched from WWA Composer

Through a modified WWA Composer interface and with the addition of a free text editor (FTE) forecasters can now enter Overview/Synopsis and Descriptive free text directly into the WWA application. Capturing free text will allow such text to be carried through the products life cycle when performing follow-up, clear, and cancel functions.

To accommodate this functionality two buttons were added to the WWA Composer, labeled *Overview/Synopsis* and *Descriptive Text*. Selecting either button will launch an editor, done in the same state as adjusting product times or county/zone selections, prior to selecting the *transmit* button. In most cases free text is entered as just described, however in the event of county/zone overlap WWA formats a "virtual" segment displaying descriptive text from each overlapping hazard in a FTE, after *transmit* is

selected. This allows an automated method for forecasters to edit the descriptive text field prior to transmitting the product. Text entered through the *Overview/Synopsis* and *Descriptive* buttons will be stored into the WWA database for future use, which differs from text provided in a "virtual" segment editor, which is not stored.

When providing Overview/Synopsis free text for multi-segmented products, like a winter storm warning (WSW) that could contain a winter weather advisory and heavy snow warning, only a single Overview/Synopsis is needed in the final WSW. Because of this, the Overview/Synopsis FTE will remain the same for each segment created while the Composer remains open. In the event that segments are collected in the WWA Monitor after the WWA Composer window has closed, the Overview/Synopsis section of the first selected segment prior to transmitting will be captured in the final product.

Finally, the FTE used for capturing free text input does not contain a spell check function as originally designed. This will be addressed in a future software release.

1.1.5.   Transmit Capability

OB2 WWA no longer utilizes the text workstation text editor to disseminate products. Instead the ability to transmit directly from WWA is provided through the use of the AWIPS handleOUP.pl function. Because generated text is no longer passed to the text workstation for editing <u>it is more important than ever to have WWA correctly configured</u>.

Although XT text editing is no longer supported a large effort was made to ensure forecasters have the ability to edit key fields during operational use. These functions include: Capturing free text, editing headlines, manipulating time sequences, selecting call-to-action statements, and much more.

<u>General Information</u>:

▸ Formatting the WCN product will not use the transmit function, and therefore the text workstation will continue as the means of disseminating *new* WCN products.

▸ handleOUP.pl uses the afos2awips.txt (a2a) file to determine product routing information and therefore it is extremely important that the site maintain an accurate and up to date a2a file.

▸ A *transmit* button replaced the *create text* button in the WWA Monitor which works similar to the transmit option found in the WWA Composer and displays a single or multi-segmented product before dissemination.
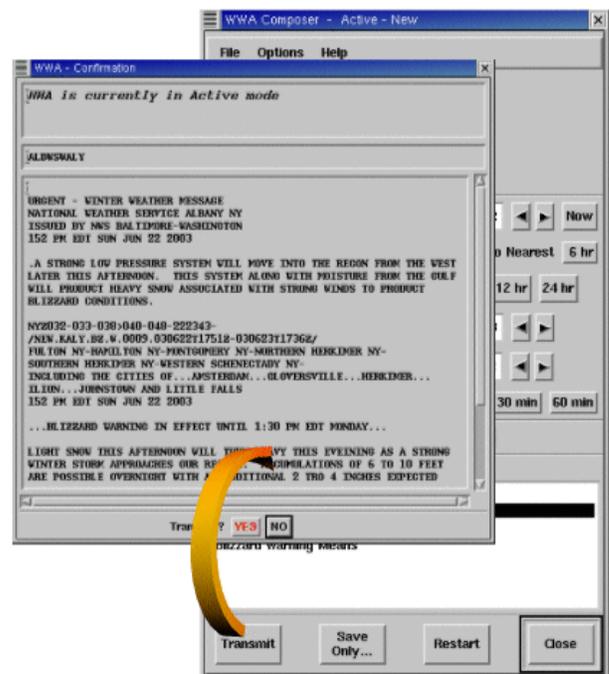
Figure 6 - WWA Transmit Interface launched from WWA Composer

▸ An intentional limitation to this design prohibits multiple transmit windows from being active at one time, included to maintain WWA database integrity. In OB3 this will expand from multiple transmit windows, to multiple transmit windows for like products.

▸ Products transmitted through this function are addressed to "ALL", with the exception of operating in practice mode which is stored locally.

▸ The text widget in the transmit interface shown in figure 6 is not editable as part of NWS quality control efforts. However, access to key fields is provided by different locations in the WWA application. That is free text is entered in the free text editor or headline editing can be done in the provided headline editor prior to launching the transmit interface.

1.1.6. Headline Editor

New NWS policy constitutes a standardized headline on long fuse watch, warning, advisory products, active around the deployment of AWIPS OB2. However, it was necessary to incorporate a headline editor for WWA generated products to account for special cases not defined under the new national policy. One example is snow amounts in mountainous regions:

...Winter Storm Warning above 5000 feet...

Providing height information in the above example is not accounted for in the national policy. Finally, because of this policy the headline editor is inactive by default. To use the headline editor forecasters must select *options*, then check the *headline editor* check button from the WWA Composer menu bar. This tells the WWA software to display the headline editor for the associated hazard once the *transmit* button is selected. To further aid in generating the needed product headline, the editor will display the standardized headline to edit. For segmented based products this data is retrieved from the headline section of the associated template file.
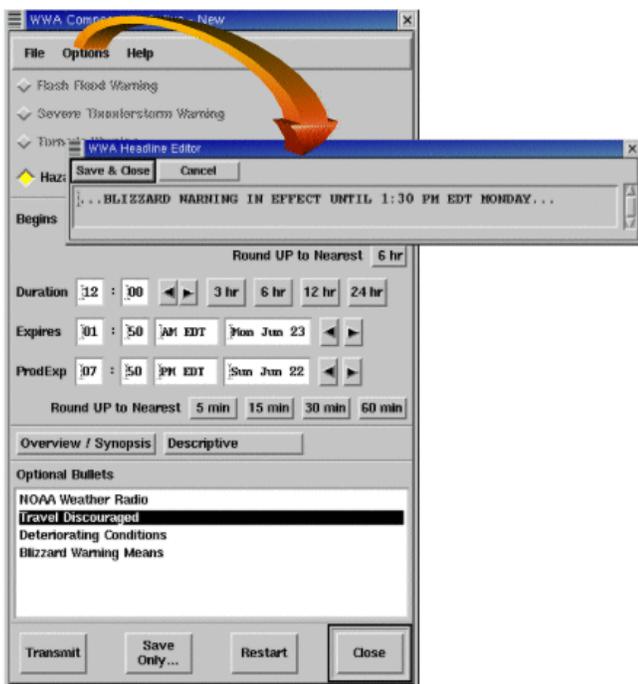
Figure 7 - Headline Editor launched from WWA Composer

1.2.   WWA Administrative (Admin) Application

First delivered in AWIPS build OB2 the WWA Administration (Admin) application provides administrators a single tool from which to configure WWA. It is no longer necessary to command line edit files and database fields which simplifies the local configuration process.

This application supports functionality found in the wwa_setup program with an addition to configuration: the WCN process, GUI settings, NWR settings, segmentation ordering, template file editing, VTEC settings, and much more.

Finally, the wwa_setup program will be discontinued in AWIPS build OB3 and for this reason sites are encouraged to utilize the WWA Admin application after the OB2 install. More information on the WWA Admin application can be obtained in the WWA Admin Users Manual by referencing in section 4.3 of this document.
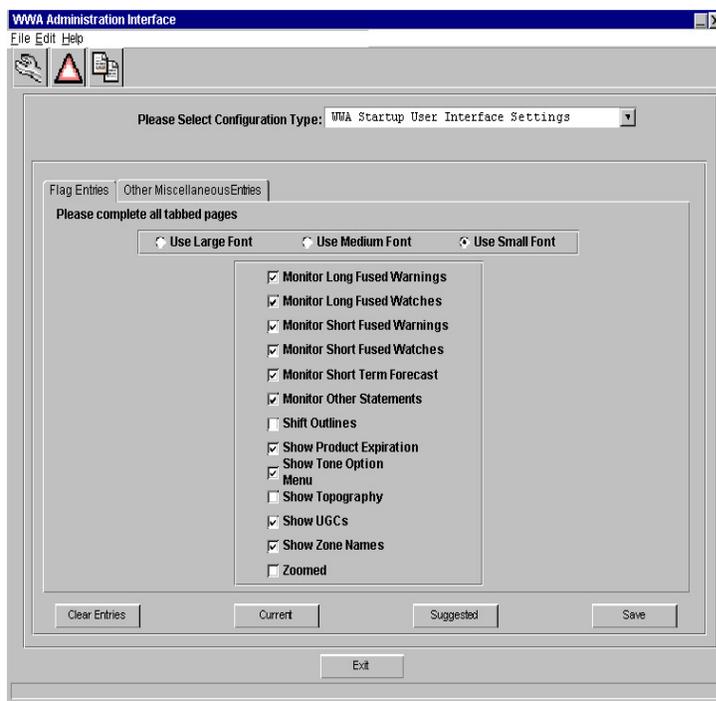
Figure 8 - WWA Administration (Admin) Interface [not an actual screen shot]

1.3.   NOAA Weather Radio (NWR) CRS product formatting

The WWA application does support automated CRS product formatting for NWR broadcasts. There are two ways WWA products are formatted for weather radio: 1) for broadcast over locally controlled NWR towers within the site's CWA and 2) for broadcast over NWR towers controlled by another WFO for broadcast over the issuance sites CWA. Also, WarnGen NWR formatting is leveraged from the WWA application through the use of the AUX_INFO field definition in WarnGen template files. This section provides an overview of the described NWR capability and configuration steps are located section 2.4 of this document.

1.3.1   **Defining the CRS message type**

WWA NWR formatted products are delivered directly, or indirectly through the NWR Browser, to CRS. In either case WWA uses a specific message type schema to deliver these broadcast ready files as described below:

<u>Long Fused Messages</u>:
Long fused WWA CRS messages take the form of CCCcatNW*, where *CCC* is the site id of the issuance site, *cat* is the hazard category name, and * is the NWR transmitter number.   The transmitter number is determined by the order this was defined in the WWA Admin application *(nwr_twrs* order number in the *geography_groups* informix database table).

<div align="center">

CCCcatNW* = long fuse message
* = the NWR transmitter number

</div>

These message types must be defined in CRS message suites specific to each NWR transmitter broadcast program for which they are valid.

Example 1:
AFOS Site ID of issuing office = GRR
AFOS Node ID of GRR = ARB
site adjacent to GRR = DTX

ARBWSWGRR - actual winter storm warning disseminated
GRRWSWNW1 - actual NWR message created by GRR
GRRWSWNW1 - NWR message received at the adjacent site DTX

Had DTX created the winter storm watch, the message type received from DTX would appear in GRR's CRS formatted product header as:

<div align="center">

DTXWSWNW1 - NWR message received **from** adjacent site DTX

</div>

and in the NWR browser the message type will be displayed as:

<div align="center">

DTXWSWNW1_(MRD#) - NWR message received **from** adjacent site DTX

</div>

Example 2 (Long fused Winter Storm Warning CRS product name):
PBZWSWNW3   (WSW issued by PBZ for PBZ CRS tower #3)
ILNWSWNW3   (WSW issued by ILN for PBZ CRS tower #3)
RLXWSWNW3   (WSW issued by RLX for PBZ CRS tower #3)

Note: PBZ's tower number 3 broadcasts warnings issued by WFO's PBZ, ILN and RLX.
Note: towers numbers are defined in WWA locally by the WFO in control of the tower, not by the issuing office.

Short Fused Messages:
Short fused WWA CRS messages (Severe Thunderstorm, Tornado and Flash Flood Warnings) will have the form CCCcatXXX, where *CCC* is the site id of the issuance site, *cat* is the category name, and *XXX* is the local site id of who controls the NWR transmitter. These messages are not transmitter specific and rely on the CRS to play them according to the LAC (Local Area Codes), UGCs embedded in the CRS header. These message types must be defined in CRS message suites specific for each NWR transmitter broadcast program for which they are valid.

CCCcatXXX = short fused message
XXX = local site

Example 1:
AFOS Site ID of issuing office = GRR
AFOS node ID of GRR = ARB
site adjacent to GRR = DTX

ARBTORGRR - actual tornado warning disseminated
GRRTORGRR - actual NWR message created by GRR
GRRTORDTX - NWR message created by GRR, **received** at DTX

Had DTX created the tornado warning, the message received from DTX would appear in GRR's CRS formatted product header as:

DTXTORGRR - NWR message received from DTX

and in the NWR browser the message type will be displayed as:

DTXTORGRR_(MRD#) - NWR message received from DTX

Example 2 (Short fused Severe thunderstorm warning CRS product name):
PBZSVRPBZ   (SVR issued by PBZ for PBZ CRS towers)
ILNSVRPBZ   (SVR issued by ILN for PBZ CRS towers)
RLXSVRPBZ   (SVR issued by RLX for PBZ CRS towers)

Note: PBZ's tower number 3 broadcasts warnings issued by WFO's PBZ, ILN and RLX.

Summary Messages:
Summary message types have the form CCCSUMNW*, where CCC is the AFOS Node ID of the local wfo, SUM is the pil category for a summary product, and * is the NWR transmitter number.

CCCSUMNW* = summary product
* = the NWR transmitter

The simple solution for this is to add a message type that contains the CCC of all your adjacent sites that broadcast on your local towers. So for example if site GRR broadcasts products for adjacent site DTX

the following message type would need to be added to the CRS database (assuming tower 1 is the correct tower reaching into DTX's area of responsibility):

DTXSUMNW1 - Summary product sent by DTX
GRRSUMNW1 - Summary product for local site, GRR for this example

1.3.2.   **Summary Products**

The concept of the WWA NWR summary product is that a warning will broadcast once and the shorter summary product is generated to play on successive broadcasts instead of the warning. If an additional warning is generated, a new summary product is generated to include both warnings. Because the summary product is in a higher suite, the new warning will not play in its suite. However as long as the warning product is sent as an interrupt message, it will always play once as an interrupt, regardless of whether it will play in the suite. So if you want to use the summary product feature, you must set up those warnings that are summarized as interrupt messages. The summary product should not be set up as an interrupt. The following procedural example may be instructive. Please note that warnings are used in the following example. The summary product concept can apply equally well to other products such as WSW and NPW in which case it may not be appropriate to have the interrupt set for these product types. This means that new products will not play before they are summarized.

1. A site issues a tornado warning for transmitter 1.

2. The tornado warning message is generated and sent to CRS.

3. The summary message is generated and sent to CRS.

4. CRS broadcasts the tornado warning message once as an interrupt message. While it is being broadcast, CRS is doing its scheduling - the tornado warning triggers the warning suite, but before the tornado warning can broadcast a second time, the summary product triggers the summary suite. Because the summary suite is the higher priority suite, it becomes the active schedule.

5. CRS continues broadcasting the summary message.

6. The site issues a severe thunderstorm warning for transmitter 1.

7. The severe thunderstorm warning message is generated and sent to CRS.

8. The summary message is generated which includes the information for both the tornado and severe thunderstorm warnings.

9. CRS broadcasts the severe thunderstorm warning message once as an interrupt message. While it is being broadcast, CRS is doing its scheduling - the severe thunderstorm warning is added to the warning suite schedule, and the new summary message replaces the old summary message in the summary suite schedule, which remains the active schedule.

10. CRS continues to broadcast the new summary message until it expires. The expiration time of the summary message is the earliest expiration time of the summarized products.

11. The active schedule drops down to the next priority suite, which is the warning suite. If any of the two warnings are still in effect, they will broadcast. When they expire, the active schedule will drop down again.

1.4.   Template Files

WarnGen, WWA, and the WWA NWR functionality use template files output by localization into $FXA_LOCALIZATION_ROOT/$FXA_LOCAL_SITE to format products. Typically WWA template start with "WWA", wwa_nwr templates start with "nwr", and WarnGen templates start with "wwa". Changes can be made to the text templates, but always change the pre template files (*.preWWA) and move the files from /awips/fxa/data/localization/nationalData to /data/fxa/customFiles (this will prevent local changes from being overwritten during installs and allow the changes to be seen from all workstations). If changes are made to existing WWA template files a WWA localization must be run on each workstation and for NWR template file changes a WWA localization on the ds machine is necessary as described in section 2.6.

There are text template files for each segmented and non-segmented product. Each template file contains life cycle bullets and calls to action (CTA) necessary for the specific hazard. Special substitutions are also made with statements formatted within the template with less than/greater than brackets. The most common type is an area substitution such as <AREA| file=wwa_zones| format=ugc>, which in this case, would print out the zones of the current hazard in an UGC format. C-type include statements can also be used within text template files. The line #include "sls_county_list.template" will include the text found in the sls_county_list.template file. Substitutions can also be handled within included text.

Bullets :

All template files includes a series of life cycle bullets. These bullets are called "hazard headline", "hazard clear", "hazard cancel", "hazard expansion", and "hazard extension". When the text is created for a particular product, its life cycle determines which bullet is used as text output. For example, if we follow-up a product and extend its expiration time, then WWA will grab the text in the "hazard extension" bullet. Also you will find, as stated above, bullets can have special substitutions. The extension bullet might have the following line: Watch extended until <EXPIRE| local>. When formatted by WWA, the output text will read "Watch extended until 900 PM EDT". The EXPIRE statement was substituted by the actual new expiration time of the product.

Segmented Template File Example:

```
//"Winter Storm Warning"
#include "${CURRENT_CWA}-offtIncl.txt"

^{nws header |
ZCZC $$cccValue!WSW$$xxxValue! DEF&
TTAA00 KIND <NOW | ddhhmm | gmt>&&

URGENT - WINTER WEATHER MESSAGE&
#include "${CURRENT_CWA}-headerIncl.txt"
<NOW | header | local >&&

...optional headline...&&

.optional overview...&

}^

^{hazard headline |
...WINTER STORM WARNING <PHRASE|warningAdvisory> ...
}^

!{hazard continue |
...WINTER STORM WARNING <PHRASE|warningAdvisory> ...
}!

!{hazard clear |
...WINTER STORM WARNING IS NO LONGER IN EFFECT...
}!

!{hazard cancel |
...WINTER STORM WARNING IS CANCELLED...
}!

!{hazard expansion |
...WINTER STORM WARNING HAS BEEN EXPANDED...
}!

!{hazard extension |
...WINTER STORM WARNING HAS BEEN EXTENDED UNTIL <EXPIRE | plain>...
}!

{NOAA Weather Radio |
Stay tuned to NOAA Weather Radio and other local media for further details or updates.&
}

{Travel Discouraged |
Any travel is strongly discouraged.  If you leave the safety of being indoors...you are
putting your life at risk.&
}

{Deteriorating Conditions |
Conditions can deteriorate rapidly in winter weather situations...slow down and allow extra
time when travelling.  Practice your winter safety rules...keep an extra
flashlight...food...and water in your car in case of emergency.&
}

{b/4 event...Winter Storm Warning Means |
A Winter Storm Warning means severe winter weather conditions are imminent or highly likely.&
}
```

Non-segmented Template File Example:

```
//"SLS Severe Thunderstorm Watch"

^{issuance header |
#include "${CURRENT_CWA}-offtIncl.txt"
ZCZC CCCNNNXXX DEF&
TTAA00 KEAX <NOW | ddhhmm | gmt>&&

BULLETIN - IMMEDIATE BROADCAST REQUESTED&
AREAL OUTLINE FOR SEVERE THUNDERSTORM WATCH NUMBER $$watchNumber!&
#include "${CURRENT_CWA}-headerIncl.txt"
<NOW | header | local >&
< PURGE |ddhhmm |gmt |last_table |trail=-& |var=expireTime >
}^

!{followup/clear/cancel header |
#include "${CURRENT_CWA}-offtIncl.txt"
ZCZC $$cccValue!SPS$$xxxValue! DEF&
TTAA00 KEAX <NOW | ddhhmm | gmt>&
<AREA |file=wwa_zones | output_field=2 | format=ugc >
< PURGE |ddhhmm |gmt |interval=15>-&&

SPECIAL WEATHER STATEMENT&
#include "${CURRENT_CWA}-headerIncl.txt"
<NOW | header | local >&
< PURGE |ddhhmm |gmt |last_table |trail=-& |var=expireTime >
}!

^{hazard headline |
SEVERE THUNDERSTORM WATCH NUMBER $$watchNumber! IN EFFECT UNTIL <EXPIRE>.&&
#include "sls_county_list.template"
}^

!{hazard continue |
SEVERE THUNDERSTORM WATCH #$$watchNumber! REMAINS IN EFFECT FOR...
<AREA |file=wwa_zones |output_field=1 |format=list
      |trail=~[2,counties_type]...&>
}!

!{hazard clear |
SEVERE THUNDERSTORM WATCH #$$watchNumber! HAS BEEN REMOVED FROM THE FOLLOWING AREAS...
<AREA |file=wwa_zones |output_field=1 |format=list |trail=...&>
}!

!{hazard cancel |
SEVERE THUNDERSTORM WATCH #$$watchNumber! THAT WAS IN EFFECT FOR...
<AREA |file=wwa_zones |output_field=1 |format=list
      |trail=~[2,counties_type]...> HAS BEEN CANCELLED.
}!

!{hazard expansion |
SEVERE THUNDERSTORM WATCH #$$watchNumber! HAS BEEN EXPANDED TO INCLUDE THE FOLLOWING AREAS...
<AREA |file=wwa_zones |output_field=1 |format=list |trail=...&>
}!

!{hazard extension |
SEVERE THUNDERSTORM WATCH #$$watchNumber! VALID FOR THE AREAS OF...
<AREA |file=wwa_zones |output_field=1 |format=list |trail=...> HAS BEEN EXTENDED UNTIL <EXPIRE
| plain>
}!
```

1.4.1.   **Time Phrase Functionality**

The WWA/WarnGen headline time phrase function was updated based on a new NWS requirement that defines a standardized headline. To accommodate this, a template change is necessary for WWA/WarnGen template files, further explained below. Although complete standardization of NWS product headlines is being pursued, policy does not yet cover all cases. Because of this it was necessary to develop a WWA headline editor, as shown in the graphic below. This editor is a checkbox activated from the WWA Composer, found under *Options* on the menu bar. Activating this function will launch a headline editor, after the *Transmit* button is selected, populated with predefined headlines from associated template files. Because template file headlines are still utilized it is still important to define headlines accurately to minimize editing during operations. Finally, the headline editor checkbox is inactive by default to support NWS policy that mandates a standardized headline.

Template Change:

The listed WWA*.preWWA template files contain the time/date qualifier changes (6hour / 12hour / 24hour) for templates located in the nationalData directory. This must be merged into local templates found in customFiles directory.

Before (OB1):
<div align="center"><PHRASE | 6hour></div>

After (OB2):

<div align="center"><PHRASE|warningAdvisory>   or   <PHRASE|watch></div>

<div align="center"><AREA |file=wwa_timezone |area=wwa_zones |timezone></div>

The above AREA substitution was also adjusted so NWS header bullets use the correct time zones associated with the areal extent of the product.

WWA Template Files:

WWA_blizzard_wrn.preWWA	WWA_blodust_adv.preWWA	WWA_blodust_wrn.preWWA
WWA_blosnow_adv.preWWA	WWA_excheat_wrn.preWWA	WWA_exheat_wat.preWWA
WWA_exheat_wrn.preWWA	WWA_fog_adv.preWWA	WWA_freez_adv.preWWA
WWA_frost_adv.preWWA	WWA_frost_wrn.preWWA	WWA_frostfrz_outlk.preWWA
WWA_frostfrz_wat.preWWA	WWA_frzdrzl_adv.preWWA	WWA_frzfog_adv.preWWA
WWA_frzrain_adv.preWWA	WWA_frzrain_wrn.preWWA	WWA_heat_adv.preWWA
WWA_hiwind_wat.preWWA	WWA_hiwind_wrn.preWWA	WWA_hvysnow_wrn.preWWA
WWA_icestrm_adv.preWWA	WWA_icestrm_wrn.preWWA	WWA_lake_eff_adv.preWWA
WWA_lake_ef_wat.preWWA	WWA_lake_wind_adv.preWWA	WWA_redflag_wat.preWWA
WWA_redflag_wrn.preWWA	WWA_slt_adv.preWWA	WWA_slt_wrn.pre.WWA
WWA_smoke_adv.preWWA	WWA_snow_adv.preWWA	WWA_snow_blosn.preWWA
WWA_volash_adv.preWWA	WWA_volash_wrn.preWWA	WWA_wind_adv.preWWA
WWA_wintstrm_wat.preWWA	WWA_wintstrm_wrn.preWWA	WWA_winwea_adv.preWWA
WWA_wndchil_adv.preWWA	WWA_wndchil_wat.preWWA	WWA_wndchil_wrn.preWWA

WWA NWR Template Files:

nwr_aircraft.preWWA	nwr_alert1.preWWA	nwr_alert2.preWWA
nwr_blizzard_wrn.preWWA	nwr_blodust_adv.preWWA	nwr_blodust_wrn.preWWA
nwr_blosnow_adv.preWWA	nwr_exheat_wrn.preWWA	nwr_exheat_wrn.preWWA
nwr_ffld_wat.preWWA	nwr_ffd_wrn.preWWA	nwr_flood_wat.preWWA
nwr_flood_wrn.preWWA	nwr_fog_adv.preWWA	nwr_freeze_wrn.preWWA
nwr_frost_wrn.preWWA	nwr_frzdrzl_adv.preWWA	nwr_frzrain_adv.preWWA
nwr_frzrain_wrn.preWWA	nwr_hazard_outlk_adv.preWWA	nwr_hiwind_wat.preWWA
nwr_hiwind_wrn.preWWA	nwr_hvysnow_wrn.preWWA	nwr_icestrm_adv.preWWA
nwr_icestrm_wrn.preWWA	nwr_pub_info.preWWA	nwr_rec_evt.preWWA
nwr_short.preWWA	nwr_slt_adv.preWWA	nwr_slt_wrn.preWWA
nwr_smoke_adv.preWWA	nwr_nsow_adv.preWWA	nwr_svrt_wat.preWWA
nwr_svrt_wrn.preWWA	nwr_tor_wat.preWWA	nwr_tor_wrn.preWWA
nwr_volash_adv.preWWA	nwr_volash_wrn.preWWA	nwr_wind_adv.preWWA
nwr_wintstrm_wat.preWWA	nwr_wintstrm_wrn.preWWA	nwr_winwea_adv.preWWA
nwr_wndchil_adv.preWWA	nwr_wndchil_wrn.preWWA	nwr_wsr88d.preWWA

Although national WarnGen template files do not use this PHRASE/AREA substitution, locally defined templates will need to accommodate this change if utilized. For more information standard time phrases in product headlines reference the Headline Time Phrase requirement document linked in section 4.3. of this document.

1.5.   WWA Operational Modes

This version of the WWA software supports four separate modes: 1) Active Mode, 2) Test Mode, 3) Practice Mode, and 4) Proposed Mode.

Active Mode:
Active mode is the operational mode used to actually issue WWA generated watches, warnings, and advisories.

Test Mode:
Test mode was designed to act as close to active, or operational, mode as possible with the exception of the word "TEST" strategically placed in the final product - See figure 9. In other words, products generated in test mode will disseminate publically, will format NWR products if set as active, and will utilize intersite coordination.

Practice Mode:
Practice mode works much differently than either

NATIONAL WEATHER SERVICE NORTHERN INDIANA
1000 AM EST TUE MAR 26 2002

.TEST TEST TEST, THIS IS ONLY A TEST. THIS IS NOT AN ACTIVE SEVERE WEATHER STATEMENT. LOW PRESSURE OVER SOUTH CENTRAL INDIANA WILL TRACK NORTHEAST INTO NORTH CENTRAL OHIO LATE THIS AFTERNOON. THIS TRACK WILL BRING A MIX OF WINTER WEATHER TO NORTHWEST OHIO AND NORTHERN INDIANA.

A MIX OF SNOW/SLEET/FREEZING RAIN WILL CONTINUE TO CAUSE SLICK ROADWAYS AND SIDEWALKS. TAKE EXTRA CAUTION WHILE TRAVELING AND ALLOW MORE TIME TO REACH YOUR DESTINATION.

STAY TUNED TO NOAA WEATHER RADIO AND OTHER LOCAL MEDIA FOR FURTHER DETAILS OR UPDATES.

INZ008-009-013-015>018-020-022>025-OHZ001-002-004-005-015-016-262100-
ALLEN IN-CASS IN-DE KALB IN-DEFIANCE OH-FULTON OH-FULTON IN-HENRY OH-HUNTINGTON IN-KOSCIUSKO IN-MIAMI IN-NOBLE IN-PAULDING OH-PULASKI IN-PUTNAM OH-WABASH IN-WHITE IN-WHITLEY IN-WILLIAMS OH-INCLUDING THE CITIES OF...ARCHBOLD...AUBURN...BRYAN...BUTLER...COLUMBIA CITY...DEFIANCE...FORT WAYNE...GARRETT...GRISSOM AFB...HICKSVILLE...HUNTINGTON...KENDALLVILLE...LIGONIER...LOGANSPORT...MONTICELLO...MONTPELIER...NAPOLEON...NEW HAVEN...NORTH MANCHESTER...OTTAWA...PERU...ROCHESTER...SWANTON...SYRACUSE...TRI-LAKES...WABASH...WARSAW...WAUSEON...WINAMAC AND WINONA LAKE
1018 AM EST TUE MAR 26 2002

...TEST WINTER WEATHER ADVISORY IN EFFECT FROM 10 AM THIS MORNING TO 11 AM EST WEDNESDAY TEST...

TEST TEST TEST, THIS IS ONLY A TEST. THIS IS NOT AN ACTIVE SEVERE WEATHER STATEMENT.

SNOW WILL CONTINUE INTO THE AFTERNOON HOURS...THEN BEGIN TO DIMINISH IN INTENSITY. THE SNOW MAY BE MIXED AT TIMES WITH SLEET. THE HEAVIEST SNOW WILL FALL ALONG A LOGANSPORT TO COLUMBIA CITY TO AUBURN LINE WHERE 5 INCHES OF SNOW IS EXPECTED. ELSEWHERE...3 TO 5 INCHES OF SNOW IS FORECAST.

Figure 9 - Test & Practice product example

test or active. In short, generating and transmitting practice products will store locally at WWAWRKWWA and not disseminate publically, will override NWR formatting and send CRS formatted products to the NWR browser, and will not utilize intersite coordination. However, the ability to follow-up, clear, and cancel is preserved, and similar to test mode, text will have "TEST" strategically placed in the final product. The idea behind practice mode is to provide a working WWA that will not disseminate internally or externally (public, adjacent sites, NWR).

Proposed Mode:
This setting is used for internal coordination only. Products generated while in proposed mode will not disseminate publically but are transmitted through the WWA intersite coordination function for coordination with adjacent WFOs. When used, generated products will display on the issuance sites GeoViewer as well as on the GeoViewers of the defined adjacent sites.

1.6.   Upgrade/Downgrade Functionality

The ability to upgrade/downgrade/replace watches and warnings has been implemented in OB2, with limitations. So as not to increase WWA "buttonology", logic for this function was built into the WWA software to automatically recognize an upgrade/downgrade/replacement for WSWs, NPWs, & RFWs, and any forecaster interaction is done through user prompts. Forecasters validate the prompted upgrade/downgrade/replace request which will generate the appropriate text and associated VTEC string. Finally, this function can be turned on or off from the WWA Administration interface with a default setting as active.

There are a couple limitations to this function. First, it is not possible within one formatted product to upgrade the same WWA (e.g. Winter Storm Watch) to more than one advisory or warning (e.g. Blizzard Warning and Sleet Warning).

For Example:

- ► A forecaster issues a Winter Storm Watch for the entire area (zones A,B,C).
- ► At some point later they decide that zone A should be a Blizzard Warning and that zone B should be a Winter Storm Advisory.
- ► With this updated version of WWA this will not work. Each segment will have to be disseminated separately.

Second, outside the initial generation of the watch, access to the watch text is not provided. In other words, when a watch is issued free text can be entered, however after forecaster validation of an upgrade/downgrade, the watch text is carried through to the final product with no editor provided.

Functional limitation are recognized and will be addressed in future builds. If in the meantime these restrictions are more burden than benefit sites are encouraged to deactivate this function.

1.7.   WWA VTEC

The VTEC code provides forecast information in a computer friendly format to simplify the decoding processes. For a VTEC string to show in a particular product the master switch must be active in conjunction with a valid phenomenon and significance codes defined for that product. The phenomenon and significance codes are defined for each hazard and the VTEC master switch is activated by a checkbox all managed within the WWA Administrative application.   This section provides a basic overview of the VTEC string as it relates to WWA. Detailed information can be obtained from the directives document 10-1703.

1.7.1   Primary (P)-VTEC

The VTEC line is completely automated and forecasters should always resist making changes. If a site notices an incorrect VTEC string this should be passed along to the regional WWA representative. Below is a simplified breakdown of a P-VTEC line for further clarity, for complete detail reference 10-1703.

/NEW.KOKX.FF.W.0101.000814T1655Z-000814T1800Z/

NEW - life cycle of product
KOKX - station
FF - phenomenon/event (pp)
W - VTEC significance (s)
0101 - Event Tracking Number (ENT)
000814T1655Z - issue day and time
000814T1800Z - expiration time

1.7.2.   Hydrologic (H)-VTEC

The Hydrologic (H)-VTEC format developed into WWA OB2 is specific to the special "Areal" type formatting. This additional (H)-VTEC line will display directly below the (P)-VTEC line and will look similar to the FFW example in figure 10.

Immediate Cause Values

ER	Excessive Rainfall
SM	Snow melt
RS	Rain and Snow Melt
DM	Dam or Levee Failure
GO	Glacier-Dammed Lake Outburst
IJ	Ice Jam
IC	Rain and/or Snow melt and/or Ice Jam
UU	Unknown

As shown, the "Areal" type of the (H)-VTEC line mainly represents place holders for each field, with the exception of the Immediate Cause.

WWA supports the "dynamic immediate cause" by providing a selectable list of values (above) to the forecaster after *transmit* is selected for hydro based products. In this listbox forecaster will double click the correct value and proceed to product dissemination.

```
WGUS51 KOKX 141656
FFWOKX
NYC103-141800-
/NEW.KOKX.FF.W.0101.000814T1655Z-000814T1800Z/
/0.ER.000000T0000Z.000000T0000Z.000000T0000Z.0/

BULLETIN - EAS ACTIVATION REQUESTED
FLASH FLOOD WARNING
NATIONAL WEATHER SERVICE NEW YORK NY
1255 PM EDT MON AUG 14 2000

THE NATIONAL WEATHER SERVICE IN UPTON NY HAS ISSUED A

* FLASH FLOOD WARNING FOR
  SOUTHWEST SUFFOLK COUNTY IN SOUTHEASTERN NEW YORK STATE

* UNTIL 200 PM EDT

* AT 1254 PM NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED THUNDERSTORMS
  MOVING NORTHWEST TOWARD THE WARNED AREA.  RAINFALL RATES FROM 2 TO 3 INCHES PER
  HOUR WILL CAUSE FLASH  FLOODING OF LOW LYING AND POOR DRAINAGE AREAS.

REPORT SEVERE WEATHER TO THE NEAREST LAW ENFORCEMENT AGENCY.
$$
```

Figure 10 - VTEC product example

1.8. Watch by County (WBC) / Watch County Notification (WCN)

The local WCN process is dependent on how the WWA application is configured at each WFO. Generally speaking the steps in figure 11 describe this process. For more specific information about what WWA keys on when ingesting SPC WCL & WOU products reference appendix A and B.

1. SPC issues a Watch County List (WCL) highlighting those counties intended for a watch.

2. WWA ingest routines recognize the WCL, identifies intended sites, searches county UGC list, and presents the WCL as a proposed product in the WWA monitor for WFO's with watched counties listed.

3. WFO/SPC coordination call.

4. SPC issues initial Watch County Outline WOU reflecting county addition/subtractions as discussed during the WFO/SPC conference call.

5. *WWA ingest routines recognize SPC's initial WOU, automatically generates the WFO WCN product, and displays the WCN on the defined text workstation for forecaster dissemination.

6. SPC disseminates hourly WOU updates based from the WFO WCN products. (Not processed by the WWA application)

Step 5 automation dependent on local WFO WCN settings. Listed step is the default setting.

Figure 11 - Watch By County (WBC) process between SPC and the WFO

Figure 12 - Watch By County (WBC) flow chart.

1.8.1.   Local WCN Testing

Although SPC issues WCL and WOU products to automatically generate WCN products through WWA it possible to test this automation locally at the WFO. The instructions provided below describe steps to simulate the arrival of an SPC WCL and WOU product, not based from an existing WCL/WOU in the local Informix database. Once the WCL or WOU products are stored into the local WFO AWIPS database reference section 3.2 of this document for instruction on generating the WCN. Another way to simulate SPC issued WCL/WOU products is to edit, and update fields highlighted in appendix A or B, and save **LOCALLY (000)**, from the AWIPS text workstation text editor.

Finally, it is assumed before any simulation is conducted the local WWA application is configured correctly - see section 2. Be extra cautious when performing steps to store a WCL, WOU, or WCN product into the local WFO Informix database. <u>If during this test the router information is not locally set, "000" or "CCC", you will disseminate publically</u>.

1.8.2.   **Simulating the SPCs WCL locally at the WFO**

1. Launch the WWA application on lx1 or lx2.
     - Use provided desktop menu option

2. Open xterm window on the same Linux box (lx1 or lx2)
     - if done as awipsusr go to step 4.

3. Login as user awipsusr:
             su -l awipsusr
             <enter awipsusr password when prompted>

4. Change into /awips directory:
             cd /awips

5. Edit a local "WCL" file(pico editor reference section 4.3):
             pico WCL# ◄ Enter # A-J

6. In the pico editor window type in the following, adjusting
    for the local site (ie...county names/UGC). The idea is to
    create a product similar to what is shown in appendix A:

   Line 1 type: **NWUS64 KWNS 101250** ◄ Enter current date & time
   Line 2 type: **WCLA LOC**   ◄ Where WCL is A-J
   Line 3   : ----- Blank Line -----
   Line 4 type: **.TORNADO WATCH A** ◄ A-J as in line 2
   Line 5 type: **COORDINATION COUNTY LIST FROM THE NWS STORM PREDICTION**
   Line 6 type: **CENTER EFFECTIVE UNTIL 2300 UTC** ◄ Enter valid time
   Line 7 type: ----- Blank Line -----
   Line 8 type: **MIC005-015-045-065-102300-** ◄ Enter a site valid UGC & time
   Line 9 type: ----- Blank Line -----
   Line 8 type: **MI**   ◄ Enter valid 2 character state ID
   Line 9 type: **. MICHIGAN COUNTIES INCLUDED ARE** ◄ Enter valid state name
   Line 10   : ----- Blank Line -----
   Line 11 type: **ALLEGAN   BARRYEATON**   ◄ Enter equivalent counties
   Line 12 type: **INGHAM**   defined In UGC line, line #8.
   Line 13 type: **$$**
   Line 14   : ----- Blank Line -----
   Line 15 type: **ATTN...WFO...GRR...** ◄ Enter site ID

7. Save changes using these commands:
             Ctrl-O
             File Name to write: WCL# **<Select Enter>** ◄ # given in step 5

8. Exit pico editor using the accelerator function:
             Ctrl-X

9. Store created WOU# file locally into AWIPS Informix database:
             textdb -w WCL# < WCL#   ◄ # given in step 5

10. Exit xterm window:
             exit

11. Check WWA Monitor for ingested WCL
     - If not in the monitor, verify settings provided in step 6 and also
       reference appendix A to ensure trigger/key locations are correct.

1.8.3.   **Simulating the SPCs WOU locally at the WFO**

1. Launch the WWA application on lx1 or lx2
    - Use provided desktop menu option

2. Open Xterm window on lx1 or lx2
    - if done as awipsusr go to step 3.

3. Login as user awipsusr:
    su -l awipsusr
    <enter awips password when prompted>

4. Change into /awips directory:
    cd /awips

5. Edit a local "WOU" file(pico editor reference section 6):
    pico WOU# ◂◂ Enter # 0-9

6. In the pico editor window type in the following, adjusting
    for the local site (ie...county names/UGC). The idea is to
    create a product similar to what is shown in Appendix B:

    Line 1 type: **WOUS64 KWNS <u>101250</u>** ◂◂ Enter current date & time
    Line 2 type: **WOU1 LOC**
    Line 3 type: ----- Blank Line -----
    Line 4 type: **TORNADO WATCH OUTLINE UPDATE FOR WT 1002**
    Line 5 type: **STORM PREDICTION CENTER NORMAN OK**
    Line 6 type: **0130 AM EDT TUE JUL 10 2003** ◂◂ Enter current
    Line 7   :   ----- Blank Line -----
    Line 8 type: **TORNADO WATCH 1002 REMAINS IN EFFECT UNTIL**
    Line 9 type: **7:00 PM EDT FOR THE FOLLOWING LOCATIONS:** ◂◂ Enter time & zone
    Line 10   : ----- Blank Line -----
    Line 11 type: **MIC005-015-045-065-102300-** ◂◂ Enter a site valid UGC & time
    Line 12   : ----- Blank Line -----
    Line 13 type: **MI**   ◂◂ Enter valid 2 character state ID
    Line 14 type: **. MICHIGAN COUNTIES INCLUDED ARE** ◂◂ Enter valid state name
    Line 15   : ----- Blank Line -----
    Line 16 type: **ALLEGAN   BARRY   EATON** ◂◂ Enter Counties defined in
    Line 17 type: **INGHAM**   UGC line #11.
    Line 18 type: **$$**
    Line 19   : ----- Blank Line -----
    Line 20 type: **ATTN...WFO...GRR...** ◂◂ Enter site ID

7. Save changes using these commands:
    Ctrl-O
    File Name to write: WOU# **<Select Enter>** ◂◂ # given in step 5

8. Exit pico editor using the accelerator function:
    Ctrl-X

9. Store created WOU# file into AWIPS Informix database:
    textdb -w WOU# < WOU#   ◂◂ # given in step 5

10. Exit xterm window:
    exit

11. Based on the default settings the WCN will be generated, then displayed
    on the defined text workstation.
      - If not displayed, verify correct settings provided in
        step 6 and also reference appendix B to insure trigger/key
        locations are defined accurately.

1.9. Site Backup

Site backup was updated in AWIPS build OB2 to use independent WWA localizations for each backup site. In other words switching into site backup from the Composer will no longer be used and the entire WWA application will be launched as the site being backed up. For configuration steps reference section 2.7. of this document and for instruction on how to operate WWA in backup mode reference section 3.3.

1.10. WWA Hazard Menu / Characteristics Table Summary

This section provides a list of WWA supported product and hazards types which is also reflected in the WWA composer's hazard menu or more specifically particular fields located in the characteristics table of the WWA database. Products listed in the hazard menu are nationally supported to promote WWA database integrity. Local changes to these products are managed through the WWA Administrative application with the exception of altering the *hazard type*, *generic name*, and *specific product name* fields or adding/removing entire products from the database. To incorporate new products nationally contact your regional WWA representative or to have local products added a request can be made through the NCF trouble ticket process

1.10.1. Hydrology

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
WATCHES					
	Hydrology				
		Flash Flood Watch	FFA	WarnGen	WWA_ffld_wat.wwaProd nwr_ffld_wat.wwaProd
		Flood Watch	FFA, FLS	WWA RiverPro	nwr_flood_wat.wwaProd WWA_flood_wat.wwaProd
WARNINGS					
	Hydrology				
		Flash Flood Warning	FFW, FFS	WWA WarnGen	WWA_ffld_wrn.wwaProd nwr_ffld_wrn.wwaProd
		Flood Warning	FLW, FLS	WarnGen WWA Riverpro	WWA_flood_warn.wwaProd nwr_flood_warn.wwaProd
		Urban/Small Stream Flood Warning	FLW	WWA	WWA_urban_wrn.wwaProd nwr_urban_wrn.wwaProd

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
STATEMENTS					
	Hydrology				
		Daily Forecast	RVS	WWA RiverPro	WWA_dlyfrcst.wwaProd nwr_dlyfrcst.wwaProd
		Daily River and Lake Summary	RVD	RiverPro	WWA_rvrlk_sum.wwaProd nwr_rvrlk_sum.wwaProd
		Drought/Water Resource Statement	ESF	WWA	WWA_drought_stmt.wwaProd nwr_drought_stmt.wwaProd
		Flash Flood Statement	FFS, FLS	WWA WarnGen	WWA_ffs.wwaProd nwr_ffs.wwaProd
		Flood Advisory	FLS	WWA	WWA_flood_adv.wwaProd nwr_flood_adv.wwaProd
		Flood Potential Outlook	ESF	WWA	WWA_hydro_outlk.wwaProd nwr_hydro_outlk.wwaProd
		Flood Statement	FLS	WWA	WWA_flood_stmt.wwaProd nwr_flood_stmt.wwaProd
		Hydrologic Summary	RVA, RVS	RiverPro	WWA_hydro_sum.wwaProd nwr_hydro_sum.wwaProd
		Minor Flooding Advisory	FLS	WarnGen WWA RiverPro	WWA_minor_fld.wwaProd nwr_minor_fld.wwaProd
		River Ice Statement	RVS	WWA RiverPro	WWA_rvrice_stmt.wwaProd nwr_rvrice_stmt.wwaProd
		River Recreational Statement	RVS	WWA RiverPro	WWA_rvrec_stmt.wwaProd nwr_rvrec_stmt.wwaProd
		River Summary	RVS	WWA RiverPro	WWA_river_sum.wwaProd nwr_river_sum.wwaProd
		Special River Statement	RVS	WWA RiverPro	WWA_spcrvr_stmt.wwaProd nwr_spcrvr_stmt.wwaProd
		Urban/Small Stream Advisory	FLS	WarnGen WWA RiverPro	WWA_urban_adv.wwaProd nwr_urban_adv.wwaProd
		Winter/Spring Flood Outlook	ESF	WWA RiverPro	WWA_wintspr_fld.wwaProd nwr_wintspr_fld.wwaProd
		Water Supply Outlook/Summary	ESF	WWA	WWA_water_supply.wwaProd nwr_water_supply.wwaProd

1.10.2. Winter Weather

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
WATCHES					
	Winter Storm				
		Winter Storm Watch	WSW	WWA	WWA_winterstrm_wat.wwaProd nwr_winterstrm_wat.wwaProd
		Lake Effect Snow Watch	WSW	WWA	WWA_lake_eff_wat.wwaProd nwr_lake_eff_wat.wwaProd
WARNINGS					
	Winter Storm				
		Blizzard Warning	WSW	WWA	WWA_blizard_wrn.wwaProd nwr_blizzard_wrn.wwaProd
		Heavy Snow Warning	WSW	WWA	WWA_hvysnow_wrn.wwaProd nwr_hvysnow_wrn.wwaProd
		Ice Storm Warning	WSW	WWA	WWA_icestrm_wrn.wwaProd nwr_icestrm_wrn.wwaProd
		Lake Effect Snow Warning	WSW	WWA	WWA_lake_eff_wrn.wwaProd nwr_lake_eff_wrn.wwaProd
		Sleet Warning	WSW	WWA	WWA_slt_wrn.wwaProd nwr_slt_wrn.wwaProd
		Winter Storm Warning	WSW	WWA	WWA_wintstrm_wrn.wwaProd nwr_wintstrm_wrn.wwaProd
ADVISORIES					
	Winter Weather				
		Freezing Drizzle Advisory	WSW	WWA	WWA_frzdrzl_adv.wwaProd nwr_frzdzl_adv.wwaProd
		Freezing Rain Advisory	WSW	WWA	WWA_fzrain_adv.wwaProd nwr_fzrain_adv.wwaProd
		Lake Effect Snow Advisory	WSW	WWA	WWA_lake_eff_adv.wwaProd nwr_lake_eff_adv.wwaProd
		Sleet Advisory	WSW	WWA	WWA_slt_adv.wwaProd nwr_slt_adv.wwaProd
		Snow Advisory	WSW	WWA	WWA_snow_adv.wwaProd nwr_snow_adv.wwaProd

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
		Snow and Blowing Snow Advisory	WSW	WWA	WWA_snow_blosn.wwaProd nwr_snow_blosn.wwaProd
		Winter Weather Advisory	WSW	WWA	WWA_winwea_adv.wwaProd nwr_winwea_adv.wwaProd
STATEMENTS					
	Winter Weather				
		Winter Storm Outlook	SPS	WWA	WWA_ww_outlk.wwaProd nwr_ww_outlk.wwaProd
		Winter Storm Summary	PNS	WWA	WWA_wintstrm_sum.wwaProd nwr_wintstrm_sum.wwaProd

1.10.3.   Non-Precipitation Weather

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
WATCHES					
	Non-Precipitation Weather				
		Excessive Heat Watch	NPW	WWA	WWA_extheat_wat.wwaProd nwr_extheat_wat.wwaProd
		Frost/Freeze Watch	NPW	WWA	WWA_frostfrz_wat.wwaProd nwr_frostfrz_wat.wwaProd
		High Wind Watch	NPW	WWA	WWA_hiwind_wat.wwaProd nwr_hiwind_wat.wwaProd
		Wind Chill Watch	NPW	WWA	WWA_wndchil_wat.wwaProd nwr_wndchil_wat.wwaProd
WARNINGS					
	Non-Precipitation Weather				
		Dust Storm Warning	NPW	WWA	WWA_blodust_wrn.wwaProd nwr_blodust_wrn.wwaProd
		Excessive Heat Warning	NPW	WWA	WWA_extheat_wrn.wwaProd nwr_extheat_wrn.wwaProd
		Freeze Warning	NPW	WWA	WWA_freez_wrn.wwaProd nwr_freez_wrn.wwaProd

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
		Frost Warning	NPW	WWA	WWA_frost_wrn.wwaProd nwr_frost_wrn.wwaProd
		High Wind Warning	NPW	WWA	WWA_hiwind_wrn.wwaProd nwr_hiwind_wrn.wwaProd
		Wind Chill Warning	NPW	WWA	WWA_wndchil_wrn.wwaProd nwr_wndchil_wrn.wwaProd
ADVISORIES					
	Non-Precipitation Weather				
		Ash Fall Advisory	NPW	WWA	WWA_volash_adv.wwaProd nwr_volash_adv.wwaProd
		Blowing Dust Advisory	NPW	WWA	WWA_blodust_adv.wwaProd nwr_blodust_adv.wwaProd
		Blowing Snow Advisory	WSW	WWA	WWA_blosnow_adv.wwaProd nwr_blosnow_adv.wwaProd
		Dense Fog Advisory	NPW	WWA	WWA_fog_adv.wwaProd nwr_fog_adv.wwaProd
		Dense Smoke Advisory	NPW	WWA	WWA_smoke_adv.wwaProd nwr_smoke_adv.wwaProd
		Freezing Fog Advisory	NPW	WWA	WWA_frzfog_adv.wwaProd nwr_frzfog_adv.wwaProd
		Frost Advisory	NPW	WWA	WWA_frost_adv.wwaProd nwr_frost_adv.wwaProd
		Heat Advisory	NPW	WWA	WWA_heat_adv.wwaProd nwr_heat_adv.wwaProd
		Lake Wind Advisory	NPW	WWA	WWA_lake_wind_adv.wwaProd nwr_lake_wind_adv.wwaProd
		Wind Advisory	NPW	WWA	WWA_wind_adv.wwaProd nwr_wind_adv.wwaProd
		Wind Chill Advisory	NPW	WWA	WWA_wndchil_adv.wwaProd nwr_wndchil_adv.wwaProd
STATEMENTS					
	Non-Precipitation Weather				
		Excessive Heat Outlook	SPS	WWA	WWA_heat_outlook.wwaProd nwr_heat_outlook.wwaProd
		Frost/Freeze Outlook	SPS	WWA	WWA_frostfrz_outlk.wwaProd nwr_frostfrz_outlk.wwaProd

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
		Hazardous Weather Outlook	HWO	WWA	WWA_hazard_outlk.wwaProd nwr_hazard_outlk.wwaProd
		High Wind Outlook	SPS	WWA	WWA_hiwind_outlk.wwaProd nwr_hiwind_outlk.wwaProd
		No Hazardous Weather Outlook	SPS	WWA	WWA_nonhazard_outlk.wwaProd nwr_nonhazard_outlk.wwaProd
		Special Weather Statement	SPS	WWA	WWA_specialstmt.wwaProd nwr_specialstmt.wwaProd
		Wind Chill Outlook	SPS	WWA	WWA_wndchil_outlk.wwaProd nwr_wndchil_outlk.wwaProd

1.10.4.   Severe Weather

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
WATCHES					
	Severe Weather				
		Severe Thunderstorm Watch	SLS, SVS	WWA	WWA_svrt_wat_sls.wwaProd nwr_svrt_wat_sls.wwaProd
		Tornado Watch	SLS, SVS	WWA	WWA_tor_wat_sls.wwaProd nwr_tor_wat_sls.wwaProd
		Severe Thunderstorm Watch (WCN)	WCN	WWA	WWA_svrt_wat_wcn.wwaProd nwr_svrt_wat_wcn.wwaProd
		Tornado Watch (WCN)	WCN	WWA	WWA_tor_wat_wcn.wwaProd nwr_tor_wat_wcn.wwaProd
WARNINGS	Severe Weather	Severe Thunderstorm Warning	SVR, SVS	WarnGen	WWA_svrt_wrn.wwaProd nwr_svrt_wrn.wwaProd
		Tornado Warning	TOR, SVS	WarnGen	WWA_tor_wrn.wwaProd nwr_tor_wrn.wwaProd
STATEMENTS					
	Severe Weather				
		Severe Weather Outlook	SPS	WWA	WWA_severe_outlook.wwaProd nwr_severe_outlook.wwaProd
		Severe Weather Statement	SVS	WarnGen	WWA_severe_stmt.wwaProd nwr_severe_stmt.wwaProd

1.10.5.   Marine and Coastal

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
WATCHES					
	Marine				
		Coastal Flood Watch	CFW	WWA	WWA_coast_fld_wat.wwaProd nwr_coast_fld_wat.wwaProd
		✸Coastal Waters Flood Watch	ZFP, SFP, CWF	WWA	N/A nwr_cstwat_fld_wat.wwaProd
		✸Hurricane Watch	CWF	WWA	N/A nwr_hurricane_wat.wwaProd
		Lakeshore Flood Watch	LSH	WarnGen	N/A nwr_lakesh_fld_wat.wwaProd
		✸Lakeshore Waters Flood Watch	ZFP, SFP, NSH	WWA	N/A <missing>
		✸Severe Thunderstorm Watch	CWF, GLF, NSH	WWA	N/A nwr_mar_svrt_wat.wwaProd
		✸Tornado Watch	CWF, GLF, NSH	WWA	N/A nwr_mar_tor_wat.wwaProd
		✸Tropical Storm Watch	CWF	WWA	N/A nwr_tropstorm_wat.wwaProd
WARNINGS					
	Marine				
		Coastal Flood Warning	CFW	WWA	N/A nwr_coast_fld_wrn.wwaProd.
		✸Coastal Waters Flood Warning	ZFP, SFP, CWF	WWA	N/A nwr_cstwat_fld_srn.wwaProd
		✸Gale Warning	CWF, GLF, NSH, OFF	WWA	N/A nwr_gale.wwaProd
		✸Heavy Freezing Spray Warning	CWF, GLF, NSH, OFF	WWA	N/A nwr_frzspray_wrn.wwaProd
		✸Hurricane Warning	CWF, OFF	WWA	N/A nwr_hurricane_warn.wwaProd
		✸Hurricane Force Wind Warning	CWF, GLF, NSH, OFF	WWA	N/A nwr_hurrfrc_wind_wrn.wwaProd
		Lakeshore Flood Warning	LSH	WWA	WWA_lakesh_fld_wrn.wwaProd nwr_lakesh_fld_wrn.wwaProd
		✸Lakeshore Waters Flood Warning	ZFP, SFP NSH	WWA	N/A nwr_lakesh_wat_fld_wrn.wwaProd

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
		✽Marine Warning	CWF GLF NSH	WWA	N/A nwr_marine_wrn.wwaProd
		Special Marine Warning	SMW	WarnGen	N/A nwr_spec_mar_wrn.wwaProd
		✽Storm Warning	CWF, GLF, NSH, OFF	WWA	N/A nwr_storm_wrn.wwaProd
		✽Tropical Storm Warning	N/A	WWA	N/A nwr_tropstrom_wrn.wwaProd
ADVISORIES					
	Marine				
		✽Dense Fog Advisory	CWF, GLF, NSH	WWA	N/A nwr_fog_adv.wwaProd
		Heavy (High) Surf Advisory	MWS	WWA	N/A nwr_hvysurf_adv.wwaProd
		✽Heavy (High) Coastal Surf Advisory	ZFP, SFP, CWF	WWA	N/A nwr_hvy_cstsurf_adv.wwaProd
		✽Low Water Advisory	MWS, GLF, NSH	WWA	N/A nwr_low_water_adv.wwaProd
		✽Small Craft Advisory	CWF, NSH	WWA	N/A nwr_smcraft_adv.wwaProd
STATEMENTS					
	Marine				
		Coastal Flood Statement	CFW	WWA	WWA_coast_fld_stmt.wwaProd nwr_coast_fld.stmt.wwaProd
		Lakeshore Flood Statement	LSH	WWA	WWA_lakesh_fld_stmt.wwaProd nwr_lakesh_fld_stmt.wwaProd
		Marine Weather Statement	MWS	WWA	WWA_mws.wwaProd nwr_mws.wwaProd

1.10.6.　　　　Fire Weather

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
WATCHES					
	Fire Weather				
		Fire Weather Watch	RFW	WWA	WWA_redflag_wat.wwaProd nwr_redflag_wat.wwaProd

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
WARNINGS					
	Fire Weather				
		Red Flag Warning	RFW	WWA	WWA_redflag_wrn.wwaProd nwr_redflag_wrn.wwaProd
STATEMENTS					
	Fire Weather				
		Fire Danger Statement	RFD	WWA	WWA_fire_wrn.wwaProd nwr_fire_dan.wwaProd

1.10.7.   Miscellaneous

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
WARNINGS					
	Miscellaneous				
		Special Avalanche Warning	SAB	WWA	WWA_aval_wrn.wwaProd nwr_aval_wrn.wwaProd
ADVISORIES					
	Miscellaneous				
		Avalanche Advisory	SAB	WWA	WWA_aval_adv.wwaProd nwr_aval_adv.wwaProd
STATEMENTS					
	Miscellaneous				
		Air Stagnation Advisory	ASA	WWA	WWA_air_stag.wwaProd nwr_air_stag.wwaProd
		Alert Administrative Message	ADM		WWA_alert2.wwaProd nwr_alert2.wwaProd
		Civil Emergency Message	CEM	WWA	WWA_civil_mes.wwaProd nwr_civil_mes.wwaProd
		Earthquake Report	EQR	WWA	WWA_earthqk_rep.wwaProd nwr_earthqk_rep.wwaProd
		Other Public Products	OPU	WWA	WWA_oth_prods.wwaProd nwr_oth_prods.wwaProd
		Public Information Statement	PNS	WWA	WWA_pns_wwaProd nwr_pns_wwaProd

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
		Record Event Report	RER	WWA	WWA_rec_evt_wwaProd nwr_rec_evt.wwaProd
		Short Term Forecast	NOW	WWA WarnGen	WWA_short_wwaProd nwr_short_wwaProd
		WSR-88D Outage Notification	FTM	WWA	WWA_wsr88d.wwaprod nwr_wsr88d.wwaProd

1.10.8. Aviation

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
WARNINGS					
	Aviation				
		Airport Weather Warning	AWW	WWA	WWA_airwx_wrn.wwaProd nwr_airwx_wrn.wwaProd
STATEMENTS					
	Aviation				
		Aircraft Incident Notification	OAV	WWA	WWA_aircraft.wwaProd nwr_aircraft.wwaProd

1.10.9. Tropical Cyclone

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
WATCHES					
	Tropical Cyclone				
		Inland Hurricane Wind Watch	NPW	WWA	WWA_hurr_wind_wat.wwaProd nwr_hurr_wind_wat.wwaProd
		Inland Tropical Storm Wind Watch	NPW	WWA	WWA_trop_wind_wat.wwaProd nwr_trop_wind_wat.wwaProd
WARNINGS					
	Tropical Cyclone				
		Inland Hurricane Wind Warning	NPW	WWA	WWA_hurr_wind_wrn.wwaProd nwr_hurr_wind_wrn.wwaProd

Hazard Type	Generic Name	Specific Product Name	Product ID	WFO App	Text / NWR Template
		Inland Tropical Storm Wind Warning	NPW	WWA	WWA_trop_wind_wrn.wwaProd nwr_trop_wind_wrn.wwaProd
STATEMENTS					
	Tropical Cyclone				
		Hurricane Local Statement	HLS	WWA	WWA_hurricane_stmt.wwaProd nwr_hurr_stmt.wwaProd
		Post Tropical Storm Report	PSH	WWA	WWA_tropstorm_rep.wwaProd nwr_tropstorm_rep.wwaProd

✳ Not an actual WWA product to issued, however included to support other AWIPS applications & functions like WarnGen, IFPS, and WWA GeoViewer displays.

2. CONFIGURATION

2.1. Defining local settings for individual hazard types

Although hazard types represented in the Composer hazard menu (section 1.10) are nationally supported, local configuration of each individual hazard is still necessary. This section describes how to configure hazard specific characteristics such as VTEC formatting, NWR settings, template file associations, product ids, and more. Please note this section is only intended to outline each field and to provide default values for fields that apply. To understand other possible entries reference the WWA Admin Users Manual.

```
1. Open an xterm window on lx1.
      - if done as user ifps skip to step 3

2. Login as user ifps:
              su -l ifps
              <enter ifpsusr password when prompted>

3. Launch the WWA Admin application:
              WWAAdmin.sh

4. Select the Hazard Menu Panel by either selecting the hazard icon on the
   button bar or by selecting edit, then Hazard Menu on the menu bar.

5. Double click on a hazard located in either the Watches, Warnings,
   Advisories, or statements listbox.

6. In the launched hazard configuration interface, Composer/Geographic/Time
    tab, set the following fields:


          WWA Composer:
                Check Active: Create in Composer

          Time Options:
                Setting locally dynamic / site specific
```

Geographical Representation:
    Check Active: **County/Zone**

7. In the hazard configuration interface select the *VTEC/NWR Format* tab and set the following fields:

    VTEC Codes:
        Phenomena = **Product dependent select from menu**
        Significance = **Product dependent select from menu**

    NOAA Weather Radio:
        Setting locally dynamic / site specific
        Provided WWA NWR Template: reference section 2.4.1 & 1.10.

8. In the hazard configuration interface select the *Miscellaneous Format* tab and set the following fields:

    UGC Format:
        Check: **Zone, County, or FireWx base on hazard**

    Product Headline:
        Setting locally dynamic / site specific
        Check appropriate IFPS product where watch
        headline injection is desired.

    Identifiers (WCN Example Only, reference section 1.10. for value):
        Issuance: **WCN**   Clearing: **WCN**
        Followup: **WCN**   Canceling: **WCN**

    Geography Lists (example only, define appropriately for hazard):
        Issuance: **cwa_z, cwa_c**   Clearing: **cwa_z, cwa_c**
        Followup: **cwa_z, cwa_c**   Cancelling: **cwa_z, cwa_c**

        Possible options:
                cwa_z = NWS Zones
                cwa_c = County Based
                marine_zone_dfm   = Marine Zones
                fwx_dfm   = Fire Weather Zones

    Segmented Checkbox:
        Check for segmented, Unchecked for Non-segmented.

    Ending Period Mentioned in ZFP?
        Not checked / Inactive

    Template File:
        Reference section 1.10 based on hazard

9. In the *Miscellaneous Format* tab select the *Edit...* button associated with the *template file* section to edit local changes.

10. In the launched template file editor customize the following settings (For more detail on other template file changes reference section 2.5 of this document):

    MND Header: Define the site id in MND header   Where CCC is
        TTAA00 **KCCC** <NOW | ddhhmm | gmt>&&   ◄ upper case site ID

> Headlines: Verify provided headlines are satisfactory for local
> use, if not edit accordingly.
>
> **Note:** AREA SUBSTITUTIONS: Verify "FILE =" and "AREA =" matches
> what is used as UGC format in step 8 (cwa_z, cwa_c,
> marine_zone_dfm, fwx_dfm).

11. Save the template file changes:
    > Select **Save** button bottom left on interface.

12. Exit Hazard Menu panel:
    > Select **Exit** button bottom center of interface.

13. Save and exit the *hazard* configuration interface:
    > Select **Ok** button bottom left on interface

14. Repeat steps 5 through 13 for each hazard as needed.

15. Exit WWA Admin application:
    > Select the **Exit** button from the bottom center of interface.

15. Login as user fxa:
    > **su -l fxa**
    > **<enter password when prompted>**

16. Run WWA lx1 localization by typing:
    > **cd /awips/fxa/data/localization/scripts/**
    > **./mainScript.csh -WWA**

17. Remotely log into lx2 by typing:
    > **rlogin lx2**
    > **<enter password *if* prompted>**

18. Run WWA lx2 localization by typing:
    > **cd /awips/fxa/data/localization/scripts/**
    > **./mainScript.csh -WWA**

19. Exit lx2 remote login session by typing:
    > **exit**

20. Remotely log into ds1 by typing:
    > **rlogin ds1**
    > **<enter password *if* prompted>**

21. Run WWA NWR localization by typing:
    > **cd /awips/fxa/data/localization/scripts/**
    > **./mainScript.csh -WWA**

22. Exit ds1, fxa, ifps login sessions and xterm window by typing:
    > **exit**
    > **exit**
    > **exit**
    > **exit**

2.2.   Activating the VTEC master switch

Before providing steps to activate the VTEC master switch it is important to understand a couple things about WWA and VTEC. First, for a VTEC string to show in a particular product the master switch must be active in conjunction with a valid phenomenon and significance codes defined for that product. The phenomenon and significance codes are defined for each product through the WWA Administrative application as described in step 7 of section 2.1.

```
1. Open an xterm window on either lx1 or lx2
     - if done as user ifps skip to step 3

2. Login as user ifps:
               su -l ifps
               <enter ifpsusr password when prompted>

3. Launch the WWA Admin application:
               WWAAdmin.sh

4. Select the Configuration Panel by clicking the wrench icon on the tool
   bar or by selecting edit, then Configuration on the menu bar.

5. In the Flag Entries tab of the configuration panel select the VTEC Switch
   checkbox to activate the VTEC master switch.

6. Save changes by selecting the Save button located on the bottom right
   of WWA Admin interface.

7. Exit WWA Admin application by selecting the Exit button located at the
   bottom of the WWA Admin interface.
```

2.3.   Watch By County / Watch County Notification Settings

Steps to configure the WWA application for WCN operational use are described in this section. Some steps may reveal a correct/valid setting and some may not. Regardless of this it is strongly recommended that each step is carried out to ensure an accurate configuration before going operational with the WCN.

There are two basic configurations steps to check off as you go.

☐   Setting WOU functionality parameters (2.3.1)
☐   Defining WCN hazard specific parameter (2.3.2)

2.3.1.   Setting WOU functionality parameters

There are numerous ways to configure the WOU functionality to define how WWA generates WCN products. This section provides the recommended default settings WFOs are expected to follow.

```
1. Open an xterm window on either lx1 or lx2
     - if done as user ifps skip to step 3
```

2. Login as user ifps:
        su -l ifps
        <enter ifpsusr password when prompted>

3. Launch the WWA Admin application:
        WWAAdmin.sh

4. Select the *Configuration Panel* by clicking the *wrench* icon on the button bar or by selecting *edit*, then *Configuration* on the menu bar.

5. Select the *Watch Outline Update (WOU)/WCN formatting* from the *Configuration Type* pull down menu.

6. Activate the option *Format (on/off)* by checking the provided box.

7. Deactivate the option *Disseminate to Public* by unchecking the provided box.

8. Activate the option *Send to Text Workstation* by checking the provided box.

9. Select *Format WCN* mode from the provided pull down menu.

10. Enter the text workstation of where to automatically popup generated WCN products upon receipt of the SPC WOU.
        WRKWG#   **◄◄ # of text workstation**

11. Select local site from *Valid Sites List*, then select the *Add* button.
       - Sites can be removed from active listbox by selecting the site and
         then by selecting the remove button.

12. Save changes by selecting the *Save* button located on the bottom right of WWA Admin interface.

13. Exit WWA Admin application by selecting the *Exit* button located at the bottom of the WWA Admin interface.

2.3.2.   Defining WCN hazard specific parameters

1. Open an xterm window on <u>lx1</u>.
      - if done as user ifps skip to step 3

2. Login as user ifps:
        su -l ifps
        <enter ifpsusr password when prompted>

3. Launch the WWA Admin application:
        WWAAdmin.sh

4. Select the *Hazard Menu Panel* by either selecting the *hazard* icon on the button bar or by selecting *edit*, then *Hazard Menu* on the menu bar.

5. In the upper left listbox labeled "Watches", scroll to and double click on <u>*Severe Thunderstorm (WCN)*</u>

6. In the launched "Severe Thunderstorm (WCN)" interface, *Composer/Geographic/Time* tab, set the following fields:

       WWA Composer:
          Check Active: **Create in Composer**

       Time Options:
          Setting locally dynamic / site specific
       Geographical Representation:
          Check Active: **County/Zone**

7. In the "Severe Thunderstorm (WCN)" interface select the *VTEC/NWR Format* tab and set the following fields:

       VTEC Codes:
          Phenomena = **SV Severe Thunderstorm**
          Significance = **A Watch**

       NOAA Weather Radio:
          Setting locally dynamic / site specific
          Provided WWA NWR Template: nwr_svrt_wat_wcn.wwaProd

8. In the "Severe Thunderstorm (WCN)" interface select the *Miscellaneous Format* tab and set the following fields:

       UGC Format:
          Check: **County**

       Product Headline:
          Setting locally dynamic / site specific
          Check appropriate IFPS product where watch
          headline injection is desired.

       Identifiers:
          Issuance: **WCN**   Clearing: **WCN**
          Followup: **WCN**   Canceling: **WCN**

       Geography Lists:
          Issuance: **cwa_z, cwa_c**   Clearing: **cwa_z, cwa_c**
          Followup: **cwa_z, cwa_c**   Cancelling: **cwa_z, cwa_c**

       Segmented Checkbox:
          Checked / Active

       Ending Period Mentioned in ZFP?
          Not checked / Inactive

       Template File:
          WWA_svrt_wat_wcn.wwaProd

9. In the Miscellaneous Format tab select the *Edit...* button associated with the Template file section to edit local changes.

10. In the launched WWA_svrt_wat_wcn.preWWA editor interface customize the following settings:

       MND Header: Define the site id in MND header   Where CCC is
          TTAA00 **KCCC** <NOW | ddhhmm | gmt>&&   ◄◄ upper case site ID

> Headlines: Verify provided headlines are satisfactory for local
> use, if not edit accordingly.

11. Save WWA_svrt_wat_wcn.preWWA template file changes:
> Select **Save** button bottom left on interface.

12. Exit template file editor interface:
> Select **Quit** button bottom right on interface.

13. Save and exit *Severe Thunderstorm (WCN)* configuration
interface:
> Select **Ok** button bottom left on interface

14. In the upper left listbox labeled "Watches", scroll to and
double click on <u>*Tornado (WCN)*</u>

15. In the launched "Tornado(WCN)" interface, *Composer/Geographic/Time* tab,
set the following fields:

> <u>WWA Composer</u>:
> Check Active: **Create in Composer**

> <u>Time Options</u>:
> **Setting locally dynamic / site specific**

> <u>Geographical Representation</u>:
> Check Active: **County/Zone**

16. In the "Tornado (WCN)" interface select the *VTEC/NWR Format*
tab and set the following fields:

> <u>VTEC Codes</u>:
> Phenomena = **TO Tornado**
> Significance = **A Watch**

> <u>NOAA Weather Radio</u>:
> **Setting locally dynamic / site specific**
> Provided WWA NWR Template: nwr_tor_wat_wcn.wwaProd

17. In the "Tornado (WCN)" interface select the *Miscellaneous
Format* tab and set the following fields:

> <u>UGC Format</u>:
> Check: **County**

> <u>Product Headline</u>:
> **Setting locally dynamic / site specific**
> Check appropriate IFPS product where watch
> headline injection is desired.

> <u>Identifiers</u>:
> Issuance: **WCN**   Clearing: **WCN**
> Followup: **WCN**   Canceling: **WCN**

> <u>Geography Lists</u>:
> Issuance: **cwa_z, cwa_c**   Clearing: **cwa_z, cwa_c**
> Followup: **cwa_z, cwa_c**   Cancelling: **cwa_z, cwa_c**

> <u>Segmented Checkbox</u>:
> **Checked / Active**

Ending Period Mentioned in ZFP?
Not checked / Inactive

Template File:
WWA_tor_wat_wcn.wwaProd

18. In the Miscellaneous Format tab select the *Edit...* button associated with the Template file section to edit local changes.

19. In the launched WWA_tor_wat_wcn.preWWA editor interface customize the following settings:

MND Header: Define the site id in MND header   Where CCC is
TTAA00 **KCCC** <NOW | ddhhmm | gmt>&&   ◄◄ upper case site ID

Headlines: Verify provided headlines are satisfactory for local use, if not edit accordingly.

20. Save WWA_tor_wat_wcn.preWWA template file changes:
Select **Save** button bottom left on interface.

21. Exit template file editor interface:
Select **Quit** button bottom right on interface.

22. Save and exit *Tornado (WCN)* configuration interface:
Select **Ok** button bottom left on interface

23. Exit WWA Admin application:
Select **File**, then **Exit** on the menu bar.

24. Login as user fxa:
su -l fxa
<enter password when prompted>

25. Run WWA lx1 localization by typing:
cd /awips/fxa/data/localization/scripts/
./mainScript.csh -wwa

26. Remotely log into lx2 by typing:
rlogin lx2
<enter password *if* prompted>

27. Run WWA lx2 localization by typing:
cd /awips/fxa/data/localization/scripts/
./mainScript.csh -wwa

28. Exit lx2 remote login session by typing:
exit

29. Remotely log into ds1 by typing:
rlogin ds1
<enter password *if* prompted>

30. Run WWA NWR localization by typing:
cd /awips/fxa/data/localization/scripts/
./mainScript.csh -wwa

31. Exit ds1, fxa, ifps login sessions and xterm window by typing:
exit
exit
exit
exit

2.4.   NOAA Weather Radio (NWR) CRS Product Formatting

This section describes how to set up NWR tower information used by both WWA and IFPS programs. To accomplish this two different applications will be utilized, the IFPS Configuration Menu and the WWA Admin interface. Setting values described for the these applications are default settings, for more information on other valid settings reference section 4.3. for related material like the WWA Admin Users Manual.

2.4.1.   Configuring a WWA Product for CRS formatting

General NWR Settings:

1. login as user ifps by typing the following in the open xterm window:
su -l ifps
<enter ifpsusr password *if* prompted>

2. Launch the WWA Admin application:
WWAAdmin.sh

3. Select the *Configuration Panel* by clicking the *wrench* icon on the tool bar or by selecting *edit*, then *Configuration* on the menu bar.

4. In the *Please Select Configuration Type* pull down menu select *WWA Site*.

5. In the *Other Miscellaneous Entries* tab of the *WWA Site configuration panel* set the following fields:

   Use Cancel Offset Time:
   Check Active

   Cancel Offset Time (Minutes):
   20

   CTA Delimiter:
   %C

   NWR Overview Section Code:
   OFF

   NWR Short Fused Geography Code:
   Let Program Decide Format

   NWR Geo List Name for Tower Association:
   nwr_twrs

6. Save changes by selecting the save button located on the bottom right of WWA Admin interface.

<u>Hazard Specific NWR Settings</u>:

7. Select the *Hazard Menu Panel* by either selecting the *hazard* icon on the button bar or by selecting *edit*, then *Hazard* on the menu bar.

8. Double click on a hazard located in either the *Watches*, *Warnings*, *Advisories*, or *statements* listbox.

9. In the hazard configuration interface select the *VTEC/NWR Format* tab and set the following NWR related fields (other settings see section 2.1.):

> <u>Send to CRS by default</u>:
> > **Check Active**
>
> <u>EAS ID</u>:
> > **Select from list, or type in EAS ID.   Hazard dependent.**
>
> <u>NWR Template File</u>:
> > **Hazard Specific**: reference section 1.10.
>
> <u>Select NWR Template file *Edit* button</u>:
> > **<Make local adjustments>**
> > **Save**
> > **Quit**
>
> <u>Select CRS *Header Info* button</u>:
> > **<set fields based on local needs>**
> > **Save**
> > **Quit**

10. Exit the hazard configuration interface by selecting *OK* at the bottom left of the WWA Admin application.

11. Exit WWA Admin application by selecting the *Exit* button located at the bottom of the WWA Admin interface.

12. Exit the ifps login session and close xterm window:
> > **exit**
> > **exit**

2.4.2.   **IFPS NWR Tower Settings**

1. Open an xterm window on either lx1 or lx2
     - if done as user ifps skip to step 3

2. Login as user ifps:
> > **su -l ifps**
> > **<enter ifps password when prompted>**

3. Launch the IFPS Configuration Menu by typing:
> > **/awips/adapt/ifps/bin/linux/config_ifps** *CCC* ↤ CCC = Site ID

4. Update zone/county-to-NWR Tower list by following these steps:
- When zones are added to your WFO or a neighbor's WFO, they will often fall under one or more of your NWR Towers' broadcast areas. Since it is difficult or impossible for the CWA Change scripts to determine which towers the new zone belongs to, you must be do this step manually.

Step 1: **In the Configure IFPS menu select "Foundation Software"**
Step 2: **From the Configure Foundation Software menu select "Establish Geographic Settings" to launch the Config Geo interface.**
Step 3: **In the Config Geo interface set the Mode selector bar to "Group".**
Step 4: **In the Config Geo interface set the Geography selector bar to "Radio Towers".**
Step 5: **In the Config Geo interface select a NWR Tower ID from the Group selector bar.**
Step 6: **Add zone to selected tower by selecting the zone on the map and then by selecting the *Add* button.**
Step 7: **Repeat steps 5 & 6 for each zone you wish to add to the tower's broadcast area.**

6. Save & Close the IFPS Configuration Menu.

7. Exit the root login session, and close xterm window:
 exit
 exit

2.4.3. WWA Summary Product Settings

The WWA_Summary product is run on the concept of summary suites, which is a similar concept to the CRS broadcast suites, and relays information concerning the WHAT, WHEN, and WHERE of each hazard. In the table below there are examples of possible summary suites. The first column refers to the name of the product. The second column refers to hazard identifiers, which define hazards such as a tornado warning (TOR) and the order in which these hazards are listed is the order in which they will appear in the summary product. The "+" character indicates the hazard is a trigger, which is similar to a trigger in the CRS setup tables. Numbers in the third column are representative of the number of hazards in the specific summary suite that must be issued at one time for a summary product to be produced. There is a hierarchical order in the summary suites so that only the summary suite with the highest priority is broadcast. For more information about how to configure this functionality reference the WWA Admin users manual.

SUM	TOR+,SVR+, FFW+,FLW+	3
SUM	TOA+,SVA+, FFA+,FLA+	4
SUM	BZW+,WSW, NPW+,HWW+	2

Figure 13 - Summery product table

2.5. **Template Files**

Since the WWA application uses the same template file class designed by FSL for WarnGen the same rules apply to WWA template files. Because of this FSLs OB2 Template file documentation located at /awips/fxa/data/localization/documentation/TextTemplate.doc on ds1 is provided below.

In WFO Advanced, the software that generates the text for watches, warnings, or advisories (wwa's) uses template files to control exactly how each wwa is built. Template files allow one to change the characteristics of a particular wwa, or add a new one, without having to change the code.

There are four main concepts to understand within template files, paragraphs, substitutions, bullets, and variables.

The text of a template is very free format. In general, consecutive spaces are changed to one space before processing, spaces preceding a period are removed, and all consecutive lines of text without an intervening blank line are considered to be in a paragraph. Also, individual lines and arguments in substitutions have their leading and trailing spaces stripped before processing. A place holder character (~) and a paragraph break character (&) are available to override this default behavior. Later in this document is a table of all special characters.

A substitution is a signal to the software to build some text based on the geographic, temporal, or other characteristics of the wwa in question. The general format of a substitution is as follows:

< substitution_type | qualifier_type = qualifier_value | ... >

The substitution type, qualifier type, and qualifier value are in general just text. However, certain qualifier types for certain substitution types do result in the qualifier value being interpreted as a number. Not all qualifier types require that a qualifier value be present. Normally, leading and trailing spaces are stripped off of the qualifier value. However, if a `==' (double equals sign) is used between a qualifier type and value, then a leading and trailing space is added to the qualifier value.

If a line or series of lines contain nothing but a substitution that results in no text being generated, it is as if those lines never appeared in the template. Thus, an null substitution will not create a paragraph break in this case. If it is desired that text from two substitutions be directly adjacent with no intervening spaces, then the trailing delimiter from the first needs to be directly adjacent and on the same line as the leading delimiter from the next. A line continuation (backslash at the end of a line, see special characters table) can accomplish this as well.

To date, by convention, substitution types are all caps and qualifier types are all lower case with underscores. The text that results from a substitution can be completely within a paragraph, be a single paragraph in itself, or span several paragraphs. Place holder and/or paragraph break characters in the text from a substitution are fully interpreted in organizing paragraphs. Later in this document is a table of currently available substitutions. Two very important types of substitutions rely on geographic entity lookup tables (gelt's) to produce their text. Some additional information about gelt's is available from newGELTmaker.doc.html in localization/documentation/. The reader is also directed to the documentation in the software modules GeoEntityLookupTable.C and GeoEntityLookupTable.H for further information.

A bullet is a piece of text that can appear or not appear in the output text based on a software switch under control of the user. The basic format of a bullet is as follows:

{= ^ title text | bullet text }

The equals sign (=) is an optional signal which, if present, specifies that the state of this bullet can be triggered by the contents of a previous product. This new feature is mostly to support follow-up and the equals sign must be immediately after the leading curly to invoke this. There is an automated algorithm for choosing the exact text that triggers the inclusion of the bullet in this case, but that can be overridden by providing a second equals sign, and then the text between the two equals signs is the trigger text. The trigger text can be divided into multiple strings, each of which must be present in the text to activate the bullet, using a comma (,) as a delimiter. Finally, one can place a leading minus sign (-) on a trigger string, which means that this text must not be present to trigger the bullet. For bullets that show up on the user interface, this only controls the initial state of the bullet; the user can always change it.

The carat sign (^) is an optional signal which, if present, specifies that this text should be marked for inclusion by default. The title text is a label by which the user refers to the text of the bullet. The bullet text is what actually appears in the output text when the bullet is marked for inclusion. Just as with a substitution, the text from a bullet can be completely within a paragraph, be a single paragraph in itself, or span several paragraphs. Substitutions can appear within a bullet, but bullets cannot be imbedded within substitutions.

There is a new feature that allows a lot more control over whether to use the text for a given bullet and whether to present that as an option on the user interface. This is based on logical operators being included in the title text of the bullet. These logical operators make it possible for bullets to be hidden from the user interface and to have their states controlled by the contents of template variables, which can also read from environment variables. These logical operators are in square brackets, and should have one of the following formats: [show xxx.oo.yyy], [on xxx.oo.yyy], [toggle xxx.oo.yyy], and [xxx.oo.yyy]. Any text not matching one of these formats will be interpreted as the plain text part of the title. The xxx and yyy is any arbitrary text that may or may not contain template variables. The `oo' is one of the following logical operators: eq, ne, gt, lt, ge, le, in (left string is contained in right string) and ni (left string is not contained in right string). The operators gt, lt, ge, and le are purely string comparisons. Only one of these logical operators are allowed in the title. The one with the lead keyword `show' means that if the test is true, then present that bullet in the user interface.  The one with the lead keyword `on' means if the test is true, then that bullet should be on by default. The `toggle' test will present that bullet in the user interface AND toggle the default inclusion state as determined by the leading carat sign (^) if true. The remaining type of test with no keyword will never be shown to the user, and its presence in the output text will depend on the truth of the test.

While it is not possible to nest substitutions, it is possible to direct the text of a substitution into a variable, and then that variable can be referred to within the value of a `lead' or `trail' qualifier in another substitution. The text of any substitution can be directed to a variable by placing a qualifier of the type `var' in the substitution.  The value of the `var' qualifier is the name of the variable that the text of the substitution is assigned to. Variable names should be all alphabetic or numeric characters, with no escape sequences or spaces (underscores are OK). A variable name is referred to with a leading `$$' (double dollar sign) and a trailing `!' (exclamation point). If one puts variable defining substitutions into a bullet, then whether that variable is defined is controlled by whether that bullet is turned on.

For products that are not on the very top level warnGen menu (in the Other: selector), the title that appears in that menu is controlled by the first line in the template file, which has the following format:

// "sort text | title text"

Any text before the optional vertical bar does not actually appear on the warnGen menu, but just controls the sorting of the products in the menu. If a template has no title, then no entry corresponding to it will appear in the Other: product selector.

Special characters for template files:

\ Backslash at the end of a line represents a line continuation to the module that actually reads the text file into memory. Line continuations are meaningless in the context of the template and can cause odd paragraphing behavior, so this use is not recommended. In all other cases, a backslash escapes the immediately following character. This means that the following character will appear in the text without the backslash, but will not be interpreted as a special character.

// Double slash is a comment marker in the module that actually reads the text file into memory. From there to the end of the line is a comment. Comments are OK, but they should be used with care inside a substitution or bullet.

$$ Double dollar sign is the signal that what follows is a variable name, and that it should be replaced with the value of that variable in the output text. The variable name is up to the next escape or exclamation point.

! Variable name terminator. In the case where a `!' is used to terminate a variable name, the exclamation point does not appear in the output text.

When appearing at the beginning of a line, the pound sign can be part of a C/C++ style include statement, which are interpreted by the module that actually reads the text file into memory.

<> Substitution delimiters. Text in angle brackets does not appear in the output directly. Substitution text is a description of some text which can be built based on the geographic, temporal, or other characteristics of the watch, warning, or advisory in question.

{} Bullet delimiters. Text in curly braces can appear or not appear in the output text based on a software switch under control of the user.

| Field separator. Separates title from the text in a bullet, individual qualifiers from each other in a substitution.

= Separates the type of a qualifier from its value. Also, when immediately following the lead curly for a bullet, allows the state of the bullet to be controlled by the text of a previous product.

^ Marks a bullet as being included by default.

,   Delimits individual trigger strings when the lead curly of a bullet is immediately followed by an equals sign, and then another equals sign to designate trigger text.

~   Indent/place holder. When internal to a paragraph, will cause a space to be placed where otherwise the automatic paragraph formatting might cause a space to be removed. At the beginning of a paragraph causes all text in that paragraph to be indented one space for each ~ that appears. An escaped space will behave just like a place holder, but not like an indent marker.

%   Reverse indent marker. When at the beginning of a paragraph causes all text in that paragraph except for the first line to be indented one space for each % that appears. Reverse indent markers can appear immediately after standard indent markers (~ characters).

&   Paragraph break. Causes a new paragraph to start without an intervening blank line. Two consecutive paragraph breaks will force a blank line to appear.

[]   Used as translation delimiters within translation control strings, and as delimiters for logical expressions in bullet titles.

.   Delimits logical operators within logical expressions that may appear in bullet titles.

`   The back quote is an invisible character, which will result in no output text but will still be treated as a non-null piece of text for the purposes of formatting the output from a GELT.

Currently available substitutions. Each type is followed by a sub table describing the applicable qualifiers. Qualifiers require no value unless qualifier values are mentioned.

Time generating substitutions. These all have the same list of possible qualifiers.

ISSUE   Causes text to be generated describing the issue time of the wwa being generated.

START   Causes text to be generated describing the start time of the wwa being generated.

EXPIRE   Causes text to be generated describing the expiration time of the wwa being generated.

EVENT   Causes text to be generated describing the time of occurrence of the weather event for which the wwa is being generated.

NOW   Causes text to be generated describing the current time.
clock   Output in clock format, e.g. 905 PM MDT. Default.
header   Output in product header format, e.g. 255 PM MDT WED JUL 12 1995.
ddhhmm   Output in like format, where dd is day, hh is hour, and mm is minute.
plain   Output including a plain language description of the time of day, e.g. 200 PM MDT WEDNESDAY AFTERNOON.
local   Output in local time. Default.
gmt   Output in Greenwich Mean Time.
interval   Value is number of minutes to round time to. By default times are not rounded.

delta	Value is number of minutes by which to change the time specified by the substitution type. Default is zero.
round	Same as interval, but causes the resulting time to be used to alter the internally held value for the time being output.
last_table	Only output this time text if the last area table used produced some output.
no_text	Will not generate any text.
lead	Value is some arbitrary text that will precede the time description.
trail	Value is some arbitrary text that will follow the time description.
var	Value is the name of a variable that has assigned to it the text produced here.
TIME_ZONE	This substitution generates no text; its purpose is to control how and whether time zone information is put into formatted time strings.
no	If present, do not output time zone information.
yes	If present, do output time zone information. This is the default case.
change	If present, output time zone information when the time zone changes. Will always output a time zone the first time after this is invoked.
force	Output time zone information using a specific unix time zone environment variable, the text of which is in the value.
TWO_TIMES	This substitution generates no text. When present, the `Change...' dialog in the warnGen interface becomes active. The beginning and ending times in this dialog are accessible in the template using the START and EXPIRE substitutions.
VAR	This substitution is made available for the purpose to allowing the user to direct the contents of the lead and/or trail qualifier into a variable.
lead	Beginning of some arbitrary text.
trail	Ending of some arbitrary text.
var	Value is the name of a variable that has assigned to it the text produced here.
DISTANCE_UNITS	This substitution generates no text; its purpose is to control the units with distances are reported.
units	Units string to attach to distances, defaults to `MILES'.
multiplier	Number to multiply raw distance values by to get the desired unit. Raw distances are in km, so default multiplier is 0.6211 (1/1.61).
MOVEMENT	This substitution generates text that describes the movement of the weather event for which the wwa is being generated. If the movement is marked as undefined, no text will be generated.
units	Units string to attach to speed, defaults to `MPH'.
multiplier	Number to multiply raw speed from tracking calculation to get desired unit. Raw speed is in km/s, so default multiplier is 2236 (3600/1.61).
interval	Value is number of speed units to round speed to. By default speeds are not rounded except to an integer.
stationary	If this is text, then it is the text used to describe a stationary weather event. If a number, then it is the speed in output units below which a weather event is considered stationary. Defaults to `STATIONARY' and 2.5.
move_lead	Value is some arbitrary text that will precede the speed and direction description for a weather event that is not stationary. Defaults to `MOVING~'.

move_trail   Value is some arbitrary text that will follow the speed and direction description for a weather event that is not stationary. Defaults to an empty string.

lead   Value is some arbitrary text that will precede the movement description.

trail   Value is some arbitrary text that will follow the movement description.

var   Value is the name of a variable that has assigned to it the text produced here.

COORDS   Puts encode latitude and longitude coordinates into the product that can be used for plotting warnings.

DURATIONS   This is a special substitution that generates no text. Each qualifier is a possible duration for the wwa, in number of minutes or in hh:mm format. The qualifier with the value `default' is the default duration. (This substitution type does completely invert the usual syntax for qualifier types and values.)

AUX_INFO   This is a special substitution that generates no text. Each qualifier is a key, and each value is some text that can be passed back to the client based on that key.

DEPICT_KEYS   This is a special substitution that generates no text. Each qualifier is a map background key that should be loaded in the wwa program when this template is being used.

COLUMNS   This is a special substitution that generates no text. This controls column layouts.

lead   Text that occurs before the first column. Defaults to `~~' (two place holders).

separator   Text that occurs before between columns. Defaults to `~' (one place holder).

trail   Text that occurs after the last column. Defaults to an empty string.

AREA   This substitution causes text to be generated describing the area of the wwa. This substitution makes use of a gelt.

file   Value is the name of a gelt file, minus the file suffix. One can use unix environment variables within the file name. There can be several `file' qualifiers in one `AREA' substitution. With one exception, all qualifiers up to the next `file' qualifier modify that `file' qualifier. The default behavior is to process each `file' qualifier in order until it finds one that actually generates some text, then will return that text for the substitution. When two consecutive file qualifiers refer to the same file, the values of other qualifiers will be preserved. They will often revert to defaults when a new file is introduced. If this is not true, then this will be noted and that qualifier will be referred to as persistent.

accumulate   If this qualifier is present, then all file qualifiers will be processed and the list of items used will be the sum total of the items produced from all of the tables. This qualifier is persistent.

area   This qualifier defines the area of interest that this gelt file will try to provide a description for. If the value is `WWA' then the base polygon of the wwa is used to define the area of interest. If the value is some other gelt file, then whatever area is currently held within that gelt is used as the area of interest. This is useful for imposing consistency between different gelts that might otherwise react differently to filtering because they have different types of geographic entities. If this qualifier is not present, whatever area is currently held

	within that gelt is used, unchanged. The first time a gelt file is referred to within a template, this qualifier needs to be present. This qualifier is persistent even to file
	changes.
format	The purpose of this qualifier is to control how lists of individual items from a gelt are put together. This value can be `list', `ugc', `count', `none', `simple', `xxx_columns', or `blank' of which `list' is the default. `list' will cause each item returned to be put in a list separated by elipses.  `ugc' will cause the items to be formatted as they were a list of ugc codes. `xxx_columns' will cause the items to be arranged in columns, where the actual text of the value is `one_column', `two_columns' up through `seven_columns'. `count' just returns an ASCII string representing the number of items in the list.  `simple' means just catenate the text together. `none' means no text is generated for this file qualifier.  `blank' means no text is generated for the list, but lead and trail qualifiers will still be used. This qualifier is persistent.
multiple	If the value is "yes", then the substitution will only produce text if more that one point describes the weather event. If the value is "no", then the substitution will only produce text if a single point describes the weather event. Any other value invokes the default behavior, which is to allow any number of points in the weather event. If the weather event does not exist, then this qualifier has no effect. This qualifier is persistent.
min_count	Minimum number of unique items that must result from the gelt query after translation in order to allow the current qualifier to generate text. Defaults to one. When in accumulate mode and the value is negative, accumulation will stop as soon as that many (absolute value) are present. This qualifier is persistent.
max_count	If positive, and more than this many items are returned from the gelt query, no text will result. If negative, will truncate the list to that many (absolute value). When in accumulate mode and the value is positive, will only dispose of the text from the specific `file' qualifier that caused the count to exceed the threshold, not all text. Defaults to a very large number. This qualifier is persistent.
output_field	Each geographic entity in a gelt has some descriptive text associated with it, which is broken into one or more fields delimited by vertical bars. The value of the `output_field' qualifier is the index of the field which is the text returned for each geographic entity, one based. Zero (the default) mean returns all text regardless of field delimiters.
item_format	This value is a translation control string which controls how each item from the gelt is reformatted. The default is to do no reformatting. See next main section for information about translation control strings. This is really a more powerful version of the `output_field' qualifier.
sort_by	This value is a translation control string which controls how the individual items from the gelt are sorted before being used. If blank, then no sorting occurs, which is the default behavior. See next main section for information about translation control strings. This qualifier is persistent.
stratify_by	This value is a translation control string which controls one manner by which the individual items from the gelt are grouped before being used. Items for which the result of the translation are the same are considered to be in the same group. For each group, it is as if a separate substitution entry was present, with the formatting

	and application of lead/trail qualifiers occurring independently. If blank, then no stratification occurs, which is the default behavior. This qualifier is persistent.
group_by	This value is a translation control string which controls yet another manner by which the individual items from the gelt are grouped before being used. This manner of grouping responds to the sort_by qualifier. Consecutive items that have the same result of the group_by translation are in the same group. These groups do not respond as if each were from a separate substitution entry. An item's position in a group can be acted on by the item_format translation control string. If blank, all items are in the same group, which is the default behavior. This qualifier is persistent.
in_group	If positive, and more than this many items in any group result from the gelt query, no text will be returned. If negative, will truncate each group to that many items (absolute value). When in accumulate mode and the value is positive, will only dispose of the text from the specific `file' qualifier that caused the maximum group size to exceed the threshold, not all text. Defaults to a very large number. This qualifier is persistent.
max_groups	If positive, and more than this many groups result from the gelt query, no text will be returned. If negative, will truncate the list to that many groups (absolute value). When in accumulate mode and the value is positive, will only dispose of the text from the specific `file' qualifier that caused the group count to exceed the threshold, not all text. Defaults to a very large number. This qualifier is persistent.
unique_by	Under normal circumstances, non-unique items will be removed from a list, this being determined by the result of their item_format qualifier. The result of the translation control string in a unique_by qualifier is yet another way in which items can be marked as non-unique and be removed. If blank, then it will not be used, which is the default behavior. This qualifier is persistent.
delta	Invokes a feature which causes a time, distance, and bearing to be assigned to each geographic entity, based on when the weather event will be closest to that entity. If a value is present, entities having a time associated with them within that many minutes of the start time of the warning will not be used. In place of this time offset, one may express the cutoff with any of the following time types as a literal string: issue, start, now, event, purge, and expire. The time, distance and bearing can be used by a translation control string. This qualifier is persistent.
interval	If present, times assigned to geographic entities will be rounded to this many minutes. This qualifier is persistent. If unrounded times are OK, then a negative value for the interval will be most efficient.
max_dist	A point more than this far from the location of the weather phenomena (in km) will not be referenced. This also causes a time, distance, and bearing to be assigned to each geographic entity, based on when the weather event will be closest to that entity. This qualifier is persistent.
proximal	Value is an additional phrase prepended to the description of a single point if it happens to be directly over some geographic entity. If a number, then this is how close a weather event must be to a location to be considered "OVER" it, in km. The default values are "OVER~" and 3 km. This qualifier is persistent.
proximal2	Just like proximal except it come into effect when the distance is between the distance for proximal and the distance for proximal2. The default values are

	"NEAR~" and 8 km. This qualifier is persistent.
portions	If present, activates a feature which will provide a plain language description of which portions of a geographic entity fall within the area of interest. A value, if present, represents the minimum size in square km that an entity must be in order to be described in this fashion, the default being zero.
central	If present, activates a feature which will allow the use of the keyword "central" when describing a portion of an area.
extreme	If present, activates a feature which will make use of the keyword "extreme" when describing the situation where only a very small portion of some geographic entity falls within the area of interest.
min_fraction	Value is the minimum fraction of a geographic entity which must fall within the area of interest for that geographic entity to be included. Default value is zero, so if this qualifier is not included, then the feature is in effect turned off.
min_area	Value is the minimum size in square km of a geographic entity which must fall within the area of interest for that geographic entity to be included. Default value is zero, so if not this qualifier is not included, then the feature is in effect turned off.
test_both	When present, a portion of a geographic entity must pass both tests to be included in the area of interest. by default, it must only pass one test or the other.
lead	Value is a translation control string which will provide text that will precede the text provided by the gelt. First item from the gelt is input to the translation control string to produce the result. This qualifier is persistent.
trail	Value is a translation control string which will provide text that will follow the text provided by the gelt. Last item from the gelt is input to the translation control string to produce the result. This qualifier is persistent.
include_field	It is possible to only include those geographic entities for which a certain text fragment occurs in a certain field; the value of this qualifier is the index of that field. This index affects the next `include_text' qualifier that occurs. The default is 0, which causes all fields to be checked.
include_text	Text to look for in the field pointed to by value of the last `include_field' qualifier. The occurrence of the `include_text' qualifier is what actually activates this feature. Multiple occurrences of the `include_text' qualifier for a single `file' qualifier will result in multiple checks for text that must be present in an entity. The default behavior is for no include checks to occur. The effect of this qualifier never carries over between `file' qualifiers.
exclude_field	It is possible to exclude those geographic entities for which a certain text fragment occurs in a certain field; the value of this qualifier is the index of that field. This index affects the next `exclude_text' qualifier that occurs. The default is 0, which causes all fields to be checked.
exclude_text	Text to look for in the field pointed to by value of the last `exclude_field' qualifier.  The occurrence of the `exclude_text' qualifier is what actually activates this feature. Multiple occurrences of the `exclude_text' qualifier for a single `file' qualifier will result in multiple checks for text that must not be present in an entity. The default behavior is for no exclude checks to occur. The effect of this qualifier never carries over between `file' qualifiers.
no_same	If present, will not generate any text if the last time a gelt based substitution was used the exact same text was generated.

cross	This allows an additional table to be used to add to information to individual item descriptions. In the cross reference table, the description is of the centroid of the entity found in the main table in the `file' qualifier. See the description of translation control strings for information about how to use the information from across reference table in an item description.
used	This qualifier allow one to exclude geographic entities that were previously used to generate text in some other instance of an AREA or WX substitution. There are three main values for this qualifier; `clear', which means empty out the list of previously used entities, `accumulate', which means add entities from this substitution to the list, and `avoid', which means do not generate text for those entities in the list. There are also two hybrid values for this qualifier; `begin', which means clear then accumulate, and `implement' which means avoid than clear.
var	Value is the name of a variable that has assigned to it the text produced here.
area_handling	Value is how the input area is used to update the current active area held by the gelt. Defaults to `initialize', which means set the active area to be the same as the input area. `add' means add the input area to the current active area. `remove' means remove the input area from the current active area. `restrict' means only keep in the current active area those area both already in the current active area and in the input area. `toggle' means change the active state of all points in the input area.
sequence	When present, this qualifier activates a feature whereby potentially redundant text can be removed from the items returned. If there is grouping as defined with the group_by qualifier, then redundant text can be removed from all but one item within the group. Any text before a leading `FROM' before any occurrence of `TO' will be removed from all but the first of the group. Any text after any occurrence of `TO' and starting with the occurrence of one of the delimiting strings supplied as arguments to any number of sequence qualifiers will be removed from all but the last of the group. Delimiting strings supplied as arguments beginning with an underscore allow redundant text to be removed from the beginning of an item when it occurs both at the beginning and end of the item. Text after the underscore in this case are strings that must occur in the redundant text for it to be removed.
WX	This substitution causes text to be generated describing the location of the weather event for which the wwa is being generated. This substitution makes use of a gelt.
file	Value is the name of a gelt file, minus the file suffix. One can use unix environment variables within the file name. There can be several `file' qualifiers in one `WWA' substitution. All qualifiers up to the next `file' qualifier modify that `file' qualifier. The code will process each `file' qualifier in order until the required minimum number of weather points have been identified. When two consecutive file qualifiers refer to the same file, the values of other qualifiers will be preserved. They will often revert to defaults when a new file is introduced. If this is not true, then this will be noted and that qualifier will be referred to as persistent.
area	This qualifier defines the area of interest that this gelt file will try to provide a

	description for. If the value is `WWA' then the base polygon of the wwa is used to define the area of interest. If the value is some other gelt file, then whatever area is currently held within that gelt is used as the area of interest. This is useful for imposing consistency between different gelts that might otherwise react differently to filtering because they have different types of geographic entities. If this qualifier is not present, whatever area is currently held within that gelt is used, unchanged. The first time a gelt file is referred to within a template, this qualifier needs to be present.
format	Value is either `list', `line', or `none', of which `line' is the default. `list' will cause a description of the locations of weather events to be presented as an elipses delimited list. `line' will cause a list of weather locations to be described as a line spanning these locations. `none' will result in no text being generated. This qualifier is persistent.
multiple	If the value is "yes", then the substitution will only produce text if more that one point is being used to describe the weather event. If the value is "no", then the substitution will only produce text if only one point is being used to describe the weather event. Any other value invokes the default behavior, which is to allow any number of points. This qualifier is persistent.
output_field	Each geographic entity in a gelt has some descriptive text associated with it, which is broken into one or more fields delimited by vertical bars. The value of the `output_field' qualifier is the index of the field which is the text returned for each geographic entity, one based. Zero mean returns all text regardless of field delimiters. This qualifier is persistent.
item_format	This value is a translation control string which controls how each item from the gelt is reformatted. The default is to do no reformatting. See next main section for information about translation control strings. This is really a more powerful version of the `output_field' qualifier. This qualifier is persistent.
portions	If present, activates a feature which will provide a plain language description of which portions of a geographic entity fall within the area of interest. A value, if present, represents the minimum size in square km that an entity must be in order to be described in this fashion, the default being zero.
extreme	If present, activates a feature which will make use of the keyword "extreme" when describing the situation where a point falls very near the boundary of some geographic entity.
min_fraction	Value is the minimum fraction of a geographic entity which must fall within the area of interest for that geographic entity to be included. Default value is zero, so if not this qualifier is not included, then the feature is in effect turned off.
min_area	Value is the minimum size in square km of a geographic entity which must fall within the area of interest for that geographic entity to be included. Default value is zero, so if not this qualifier is not included, then the feature is in effect turned off.
test_both	When present, a portion of a geographic entity must pass both tests to be included in the area of interest. by default, it must only pass one test or the other.
lead	Value is a translation control string which will provide text that will precede the text provided by the gelt. First item from the gelt is input to the translation control string to produce the result. This qualifier is persistent.
trail	Value is a translation control string which will provide text that will follow the

	text provided by the gelt. First item from the gelt is input to the translation control string to produce the result. This qualifier is persistent.
include_field	It is possible to only include those geographic entities for which a certain text fragment occurs in a certain field; the value of this qualifier is the index of that field. This index affects the next `include_text' qualifier that occurs. The default is 0, which causes all fields to be checked.
include_text	Text to look for in the field pointed to by value of the last `include_field' qualifier. The occurrence of the `include_text' qualifier is what actually activates this feature. Multiple occurrences of the `include_text' qualifier for a single `file' qualifier will result in multiple checks for text that must be present in an entity. The default behavior is for no include checks to occur. The effect of this qualifier never carries over between `file' qualifiers. exclude_field - It is possible to exclude those geographic entities for which a certain text fragment occurs in a certain field; the value of this qualifier is the index of that field.  This index affects the next `exclude_text' qualifier that occurs. The default is 0, which causes all fields to be checked.
exclude_text	Text to look for in the field pointed to by value of the last `exclude_field' qualifier.  The occurrence of the `exclude_text' qualifier is what actually activates this feature. Multiple occurrences of the `exclude_text' qualifier for a single `file' qualifier will result in multiple checks for text that must not be present in an entity. The default behavior is for no exclude checks to occur. The effect of this qualifier never carries over between `file' qualifiers.
filter	If present, activates behavior where no item in a gelt can be referred to unless it is identified as being at least partially within the area currently held by the gelt.
no_same	If present, will not generate any text if the last time a gelt based substitution was used the exact same location description was generated.
proximal	Value is an additional phrase prepended to the description of a single point if it happens to be directly over some geographic entity. If a number, then this is how close a weather event must be to a location to be considered "OVER" it, in km. The default values are "OVER~" and 3 km. This qualifier is persistent.
proximal2	Just like proximal except it come into effect when the distance is between the distance for proximal and the distance for proximal2. The default values are "NEAR~" and 8 km. This qualifier is persistent.
max_dist	A point more than this far from the location of the weather phenomena will not be referenced. This qualifier is persistent.
interval	If present, a reported time for the weather event is rounded to this many minutes. This qualifier is persistent.
delta	Normally, a `WX' substitution will describe the location of the weather event as it was identified on the last frame with the storm marker.  If the `delta' qualifier is present, then this substitution will describe the projected location of the weather event that many minutes in the future. This substitution will not generate text if the resulting time is not within the valid period of the wwa.
used	This qualifier allows one to exclude geographic entities that were previously used to generate text in some other instance of an AREA or WX substitution. There are three main values for this qualifier; `clear', which means empty out the list of previously used entities, `accumulate', which means add entities from this substitution to the list, and `avoid', which means do not generate text for those

entities in the list. There are also two hybrid values for this qualifier; `begin', which means clear then accumulate, and `implement' which means avoid than clear.

var	Value is the name of a variable that has assigned to it the text produced here.
sequence	When present, this qualifier activates a feature whereby potentially redundant text can be removed from the items returned. If there is grouping as defined with the group_by qualifier, then redundant text can be removed from all but one item within the group. Any text before a leading `FROM' before any occurrence of `TO' will be removed from all but the first of the group. Any text after any occurrence of `TO' and starting with the occurrence of one of the delimiting strings supplied as arguments to any number of sequence qualifiers will be removed from all but the last of the group. Delimiting strings supplied as arguments beginning with an underscore allow redundant text to be removed from the beginning of an item when it occurs both at the beginning and end of the item. Text after the underscore in this case are strings that must occur in the redundant text for it to be removed.

This section describes how translation control strings work. As mentioned before, each piece of text found in the *.id file of a gelt is broken up into fields by vertical bars. A translation control string allows the user to intermingle literal text, untranslated text straight from one of the fields of an item of gelt text, or an item of gelt text that is translated somehow. Here is an example of a translation control string:

ABC [1]DEF[2,tuv] HIJ [xyz]

The result of this translation control string will be the literal text "ABC ", followed by the contents of field one, followed by the literal text "DEF", followed by the contents of field 2 acted on by the translation type `tuv', followed by the literal text " HIJ ", followed by the result of translation type `xyz' acting on the whole gelt item. A field index of 99 is treated the same as literal text.

There are several numbers that can be added to the field index that will allow additional flexibility in formatting.   Adding 50 to the field index will cause the formatting code to try to get a field from cross reference text. This will only work if a `cross' qualifier is present with the table from which one is generating text. 50 means all text from the cross reference table, 51 means field one from the cross reference table, etc.
The other numbers that can be added to field indices control whether text is generated based on an item's position in a group. Adding 1000 means show this text only if the items current group has exactly one item. Adding 2000 means show this text only if the items current group has more than one item. Adding 3000 means show this text only if there is just one weather point. Adding 6000 means show this text only if there is more than one weather point.

Group positions are referred to as front, back, and mid, referring to the first, last, and anything not first or last, respectively. Additionally, start and end refer to the first and last in the entire lists of items. These are the numbers that can be added to a field index to refer to the various positions in a group:

100 - start or front
200 - start
300 - front
400 - mid

500 - back
600 - end
700 - back or end

If one of these numbers is added to the field index then the item must be in that position in the group for that text to be shown. If the field index is made negative, then the item must not be in that position in the group for that text to be shown. Here is a list of the recognized translation types. For some of them, the text of the gelt item is not actually used.

state   This translation attempts to convert an upper case postal abbreviation into a state name. The data for this translation is in the file nationalData/state.abrev.

area   This translation attempts to convert a lower case abbreviation of an area of a state into plain language, such as `ne' to `NORTHEAST'. The data for this translation is in the file nationalData/areas.abrev.

county_type   This translation attempts to identify the state in question and provide the proper nomenclature for counties or county equivalents (i.e. PARISH). The data for this translation is in the file nationalData/county_type.abrev.

counties_type   Same as `county_type' translation except that it will return plural if the number of items returned from the gelt query is more than one.

area_state   This translation combines the results of the `state' and `area' translation and attempts to provide text such as `NORTHEAST TEXAS'.

county_area_state   This translation combines the results of the `state' `area', and `county_type' translation and attempts to provide text such as `BACA COUNTY IN SOUTHEAST COLORADO'.

clock   Provides a clock format description of the local time. Uses the beginning of the wwa for the `AREA' substitution, uses the time of the weather event for a `WX' substitution. This translation type does not use the text of the gelt item.

plain   Just like a `clock' translation type except it provides a plain language description of the date and time.

header   Just like a `clock' translation type except it provides a header format description of the date and time.

ddhhmm   Provides a ddhhmm format description of the gmt time. Uses the beginning of the wwa for the `AREA' substitution, uses the time of the weather event for a `WX' substitution. This translation type does not use the text of the gelt item.

count   Returns an aSCII representation of the count of the number of items returned from a gelt query.

gcnt	Returns an aSCII representation of the count of the number of items in a group.
index	Returns an aSCII representation of the gelt table index of an item. Really only useful in a `sort_by', `group_by' or `unique_by' qualifier.
-index	Returns an aSCII representation of the negative of a gelt table index of an item. Really only useful in a `sort_by' qualifier.
gidx	Returns an aSCII representation of the position in its group for an item.
itime	Returns an aSCII representation of the unix time associated with an item. Really only useful in a `sort_by', `group_by' or `unique_by' qualifier.
-itime	Returns an aSCII representation of the negative of the unix time associated with an item. Really only useful in a `sort_by' qualifier.
lat	Returns an aSCII representation of the latitude associated with an item. Really only useful in a `sort_by' qualifier.
-lat	Returns an aSCII representation of minus the latitude associated with an item. Really only useful in a `sort_by' qualifier.
lon	Returns an aSCII representation of the latitude associated with an item. Really only useful in a `sort_by' qualifier.
-lon	Returns an aSCII representation of minus the latitude associated with an item. Really only useful in a `sort_by' qualifier.
size	Returns an aSCII representation of the size in hectares of an entity (to the resolution of the gelt grid). Really only useful in a `sort_by' qualifier.
-size	Returns an aSCII representation of the negative of the size in hectares of an entity. Really only useful in a `sort_by' qualifier.
table	Returns an aSCII representation of the order of the `file' qualifier in use within the substitution. Only useful if in accumulate mode and for a `sort_by', `group_by' or `unique_by' qualifier.
-table	Returns an aSCII representation of the negative of the order of the `file' qualifier in use within the substitution. Only useful if in accumulate mode and for a `sort_by' qualifier.
dist	Returns an aSCII representation of the distance from weather event in tenths of km. Really only useful for a `sort_by', `group_by' or `unique_by' qualifier.
-dist	Returns an aSCII representation of the distance from weather event in tenths of km. Really only useful for a `sort_by' qualifier.

azran	Adds description of distance and bearing in miles and degrees meteorological from an entity to the weather event. For zero distance will add proximity descriptor.
azrn0	Adds description of distance and bearing only if distance is greater than zero.
azrn1	Adds description of distance and bearing. Uses proximity descriptor if distance is zero; strips portion of area descriptor otherwise.
azrn2	Adds description of distance and bearing only if distance is greater than zero; strips portion of area descriptor.
azrn3	Describes distance and bearing; uses proximity descriptor if distance is zero.
azrn4	Describes distance and bearing only if distance is greater than zero.
county_count	Returns an aSCII representation of the count of the number of items returned from a gelt query, followed by the same output one would get from the `counties_type' translation.
alpha	Removes all non-alphabetic characters.
S	Blank if the item count is less than two, otherwise returns "S".
s	Blank if the item count is less than two, otherwise returns "s".

2.5.1.   Product ID's

When first configuring WarnGen & IFPS it is important to make sure that the product ids which WarnGen passes to the wwaServer are consistent with the actual ids of the local office. This use to apply to WWA prior to OB2 however OB2 WWA no longer uses the wwaServer, where WarnGen & IFPS continue its use.

To Verify the Product ID:

```
1. Open an xterm window on either lx1 or lx2

2. Log into ds1:
                rlogin ds1

3. Change to the log directory by typing
                logs

4. Determine the most recent wwaServer log file by typing
                ll -t wwaServer*

5. Read the last few lines of the latest log file:
                tail -f <wwaServer file name>

6. Launch the WWA application if not already active:
                Select from desktop menu bar
```

7. Generate a product using both WWA and WarnGen. A new line will appear in
   the log file viewable from the step conducted in line 5.

8. Verify that the product ID after ".productId" matches what you would
   expect. If the product ID does not match read the *Inconsistent Product
   ID* section below step 12.

9. Stop the tail operation active in the xterm window by typing:
                    ctrl-c

10. Exit the DS1 login by typing:
                    exit

11. Close the xterm window by typing:
                    exit

12. Close the WWA application by selecting the *Exit* button located on the
    bottom right of the WWA monitor.

<u>Inconsistent Product ID</u>:

<u>WWA & WarnGen uses the following for the IDs which are passed to the server</u>:

> ${CCC} NNN ${XXX}, where CCC and XXX are defined in
> /awips/fxa/data/localization/<site>/<site>-mainConfig.txt. If these are incorrect, look below on
> how to change them. NNN is defined in the template file for each product
> (/awips/fxa/data/localization/nationalData/wwa*.preWWA). Within the WarnGen templates
> there is a substitution called AUX_INFO. The AUX_INFO substitution specifies the details of
> the hazard so that the product is stored in the WWA database. One of the fields is "issue_prod".
> Look at this field to verify that NNN is correct (Note: $cccValue! and $xxxValue! will be
> expanded based on CCC and XXX as defined above).

> **Note**: Just saving the product will cause the issued flag to be switched if the product is
> saved under the official ID.   If a forecaster wants to modify a product and save it prior to
> sending it out they should save the product under the work ID and then switch the ID prior
> to sending the product out.

<u>AUX_INFO substitution Example</u>:

> <AUX_INFO |geo_decriptor=1 |wwa_type = 3 |wx_hazard=Winter Storm
> |specific_hazard=Snow|issue_prod=$$cccValue!WSW$$xxxValue >

> geo_descriptor: 1 (for a zone based product), 2 (for a county based product)
> wwa_type: 1 (for a watch), 2 (for a warning), 3 (for an advisory), 4 (for a statement)
> wx_hazard: The weather hazard as found in the WWA Admin application
> specific_hazard: The specific wx hazard as found in the WWA Admin application
> issue_prod: $$cccValue!NNN$$xxxValue!

> If not specified in the template file, geo_descriptor defaults to 2 and wwa_type defaults to 2. If
> the AUX_INFO substitution is not included in the warnGen template, then WWA will never
> recognize the warnGen product, If the entries in AUX_INFO don't exactly match an entry in the

characteristics table, then the product will remain unissued in the WWA Monitor, and NWR messages will not be generated.

WWA and WarnGen use the following for the IDs which are formatted in the text:

$$cccValue!NNN$$xxxValue! is used in the text template at the appropriate spot in the header. NNN is defined in each text template dependant upon the type of product. $$cccValue! and $$xxxValue! are defined by ${CURRENT_CWA}-offtIncl.txt which is further defined by CCC and XXX values in /awips/fxa/data/localization/<site>/<site>-mainConfig.txt. If these are incorrect, look below for the method to correct them.

If CCC or XXX needs to be changed:
CCC and XXX are defined in /awips/fxa/data/localization/<site>/<site>-mainConfig.txt. This file will only have CCC defined initially.   The software defaults to $FXA_LOCAL_SITE for XXX if XXX is not defined in <site>-mainConfig.txt. Place a copy of /awips/fxa/data/localization/<site>/<site>-mainConfig.txt in /data/fxa/customFiles so that your changes are not overwritten during the next install.   Also, this location is viewable from all workstations so the changes do not need to be pushed out to all workstations.   Change the value after @@@CCC as needed, and if XXX needs to be changed, then at the end of the file, add the following line: @@@XXX KKK where KKK is the value you wish to be used as the XXX substitution. Note that XXXL and XXXR are not related to this issue, so a specific XXX line must be added. If the issue_prod needs to be modified, copy the template to /data/fxa/customFiles and make the necessary changes.   If either file is changed you will need to do a "wwa" localization as defined in section 2.6 of this document.

2.6.   WWA Localization

   This section describes localization as it relates to WWA. Localization uses the preWWA files in the /data/fxa/customFiles directory or /awips/fxa/data/localization/nationalData directory to create the template (.wwaProd) files, which are stored in /awips/fxa/data/localizationDataSets/CCC (CCC - Site id). When localization is run the script makeWWAtables.csh is responsible for making site specific WWA template files. The script constructs the template files by making substitutions in the preWWA files. The variables to be substituted in the preWWA files are preceded by three at symbols "@@@". The script replaces these variables with the site specific definition of that variable. This allows for substitutions such as state and state abbreviations to be correctly formatted for each site when localization is run. For example, the variable "@@@1" in the sls_county_block.template file will be replaced with the state abbreviation. Once all the substitutions are completed the file extensions are changed to ".wwaProd" and are placed into the site's localization directory.

Steps to run WWA localization WWA template files:

```
1. Open an xterm window on lx1.

2. Login as user fxa:
              su -l fxa
              <enter fxa password when prompted>
```

3. Run WWA localization by typing:
                        /awips/fxa/data/localization/scripts/mainScript.csh -WWA

4. Exit fxa login session, and xterm window by typing:
                exit
                exit

5. Repeat steps 1 through 4 for <u>lx2</u>

<u>Steps to run WWA localization for NWR template files</u>:

1. Open an xterm window on <u>lx1</u>.

2. Login as user fxa:
                su -l fxa
                <enter fxa password when prompted>

3. Remotely connect to DS1 by typing:
                rlogin ds1
                <enter password *if* prompted>

4. Run WWA localization by typing:
                        /awips/fxa/data/localization/scripts/mainScript.csh -WWA

5. Exit DS1 login session, fxa user session, and xterm window by typing:
                exit
                exit
                exit

2.7.   WWA Site Backup

       With the switch to independent localizations for site backup WFOs can define how products are generated while in backup mode. The first option is to utilize local template files while backing up another WFO or to used template files retrieved from the primary/secondary backup sites. In either case it will be necessary to define separate WWA template files for the local site, primary, and secondary backup sites as part of the independent localization process.   The following steps suggest two different methods to configure WWA for site backup procedures.

<u>Use Local Template Files For Site Backup</u>:

1. Open an xterm window on <u>lx1</u>.

2. Login as user fxa:
                su -l fxa
                <enter fxa password when prompted>

** Primary Site Backup Steps **

3. Create a temp directory in /tmp by typing:
          mkdir /tmp/WWAPrimary

4. Copy all local template files from the *customFiles* directory to the newly
   created *WWAPrimary* directory by typing (sites using nationalData files
   should copy from /awips/fxa/data/localization/nationalData):
          cp /data/fxa/customFiles/WWA_*.preWWA /tmp/WWAPrimary

5. Change into new *WWAPrimary* directory:
          cd /tmp/WWAPrimary

6. Rename <u>each</u> template file to begin with CCC- which can be done by typing:
          mv <name>.preWWA CCC-<name>.preWWA   ⬱ name = file name &
                                                      CCC = primary backup
                                                      site id

7. Edit <u>each</u> template to remove any local defined fields or to adjust fields
   to better represent the site being backed up.
      - Such fields could be hardwired local site ids, CTA statements etc...
          pico CCC-<name>.preWWA   ⬱ CCC = primary backup site id &
                                             name = file name

8. Once the primary backup site templates have been prepared move each
   template to the *customFiles* directory by typing:
          mv CCC-*.preWWA /data/fxa/customFiles   ⬱ CCC = primary
                                                            backup site id

** Secondary Site Backup Steps **

9. Create a temp directory in /tmp by typing:
          mkdir /tmp/WWASecondary

10. Copy all local template files from the *customFiles* directory to the
    newly created *WWASecondary* directory by typing (sites using nationalData
    files should copy from /awips/fxa/data/localization/nationalData):
          cp /data/fxa/customFiles/WWA_*.preWWA /tmp/WWASecondary

11. Change into new *WWASecondary* directory:
          cd /tmp/WWASecondary

12. Rename <u>each</u> template file to begin with CCC- which can be done by typing:
          mv <name>.preWWA CCC-<name>.preWWA   ⬱ name = file name &
                                                      CCC = secondary backup
                                                      site id

13. Edit <u>each</u> template to remove any local defined fields or to adjust
    fields to better represent the site being backed up.
      - Such fields could be hardwired local site ids, CTA statements etc...
          pico CCC-<name>.preWWA   ⬱ CCC = secondary backup site id
                                             & name = file name

14. Once the secondary backup site templates have been prepared move each
    template to the *customFiles* directory by typing:
          mv CCC-*.preWWA /data/fxa/customFiles   ⬱ CCC = secondary
                                                         site id

15. Delete *WWAPrimary* and *WWASecondary* directories by typing:
> **cd**
> **rmdir /tmp/WWAPrimary**
> **rmdir /tmp/WWASecondary**

16. Run WWA lx1 localization by typing:
/awips/fxa/data/localization/scripts/mainScript.csh -WWA CCC*(CCC=secondary site id)*

17. Remotely connect to lx2 by typing:
> **rlogin lx2**
> **<enter password *if* prompted>**

18. Run WWA lx2 localization by typing:
/awips/fxa/data/localization/scripts/mainScript.csh -WWA CCC*(CCC=secondary site id)*

19. Exit lx2 login session, fxa user session, and xterm window by typing:
> **exit**
> **exit**
> **exit**

<u>Use Primary/Secondary Backup Site Template Files</u>:

1. Contact the primary and secondary backup sites and retrieve the prepared tar file containing their WWA template files.

2. Open an xterm window on <u>lx1</u>.

3. Login as user fxa:
> **su -l fxa**
> **<enter fxa password when prompted>**

4. Create a temp directory in /tmp by typing:
> **mkdir /tmp/wwa**

5. Copy the of the primary .tar file into to the newly created *wwa* directory by typing: *CCC = backup*
> **cp *<path>*/*CCC*-WWAOB2Templates.tar /tmp/wwa**   ← *site & path = file location*

6. Change into new *wwa* directory:
> **cd /tmp/wwa**

7. Uncompress the tar file by typing:
> **tar -xvf *CCC*-WWAOB2Templates.tar**   ← *CCC = backup site id*

8. Rename <u>each</u> template file to begin with CCC- which can be done by typing:
> **mv *<name>*.preWWA *CCC*-*<name>*.preWWA**   ← *name = file name & CCC = backup site id*

9. Edit <u>each</u> template to remove any local defined fields or to adjust fields to better represent the site being backed up.
   – Such fields could be hardwired local site ids, CTA statements etc...
> **pico *CCC*-*<name>*.preWWA**   ← *CCC = backup site id & name = file name*

10. Once the template files have been prepared move each template to the *customFiles* directory by typing:
        mv *CCC*-*.preWWA /data/fxa/customFiles   ◀◀ CCC = backup site id

11. Repeat steps 5 through 10 for the secondary backup site.

12. Delete wwa directory by typing:
        cd
        rmdir /tmp/wwa

13. Run WWA lx1 localization by typing:
***/awips/fxa/data/localization/scripts/mainScript.csh -WWA CCC** (CCC=backup site id)*

14. Remotely connect to lx2 by typing:
        rlogin lx2
        <enter password *if* prompted>

15. Run WWA lx2 localization by typing:
***/awips/fxa/data/localization/scripts/mainScript.csh -WWA CCC** (CCC=backup site id)*

16. Exit lx2 login session, fxa user session, and xterm window by typing:
        exit
        exit
        exit

Prepare Local Template files For Another WFO:

1. Open an xterm window on <u>lx1</u>.

2. Login as user fxa:
        su -l fxa
        <enter fxa password when prompted>

3. Change into customFiles directory by typing:
        cd /data/fxa/customFiles

4. Compress WWA Template files by typing:
        tar -cvf *CCC*-WWAOB2Templates.tar wwa_*.preWWA ◀◀ CCC = local
                                             site id

5. The local template files are now prepared if backup sites request these files.

4. Exit fxa session and xterm window by typing:
      exit
      exit

2.8.   **Watch by County / Watch County Notification backup**

WWA does not currently support backup procedures for the WCN process. Something to be addressed at a future date.

3.   USING THE WATCH, WARNING, ADVISORY APPLICATION

The OB2 WWA client is only supported for Linux however it is still possible to run WWA from the HP workstation by selecting the provided menu option described below. Although the client interface will run on the Linux box the display will automatically port to the HP system where activated.

Launch WWA on lx1 or lx2:

```
1. On either lx1 or lx2 select the WWA option from the linux menu bar
```

Launch WWA on HP workstations:

```
1. From the HP workstation desktop menu select the option to launch WWA from
   lx1 or lx2.
     - Keep in mind that the number of WWA applications running at the same
       time is limited to 3 per Linux system.
```

3.1.   **Creating Watch, Warning, Advisory Products**

3.1.1.   **Generating a single segmented WWA product**

Pre-Conditions:	• No highlighted product in WWA Monitor
Event Course:	**Generating a single segmented WWA product.**

1) Select *New...* **from the WWA Monitor to launch the Composer interface.**

2) Select a *Hazard* **type from the WWA Composer pull down menu.**

3) Select geographical area of hazard on WWA Geo-Viewer.

4) Adjust *Begins*, *Expires*, **and** *ProdExp* **time fields in the WWA Composer.**

5) Select the *Overview/Synopsis* **and/or** *Descriptive* **text buttons to enter free text (product dependent).**

6) Select any *Optional Bullets* **from the Composer.**

7) Select *Transmit* **to open WWA transmit window display.**

8) Evaluate the final product, then select *Yes* **to disseminate.**
     • Select *No* and return to product preparation process.

Post-Conditions:	New issued (white) product in WWA Monitor, public dissemination of product.
	Page 1 of 1

3.1.2.   **Generating a multi-segmented WWA product**

Pre-Conditions:	• No highlighted product in WWA Monitor
Event Course:	**Generating a multi-segmented WWA product**

1) Select *New...* from the WWA Monitor to launch the Composer interface.

2) Select a *Hazard* type from the WWA Composer pull down menu.

3) Select geographical area of hazard on WWA Geo-Viewer.

4) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer.

5) Select the *Overview/Synopsis* and/or *Descriptive* text buttons to enter free text (product dependent).

6) Select any *Optional Bullets* from the Composer.

7) Select *Save Only...* to store segment in WWA Monitor.

8) Repeat steps 2-7 for each new hazard segment.

9) Close the WWA Composer by selecting the *Close* button located on the bottom right of interface.

10) In the WWA Monitor highlight each generated segment for collection into final WWA product.

11) Select *Transmit* from the WWA Monitor to display transmit interface.

12) Evaluate the final product, then select *Yes* to disseminate.
    • Select *No* and return to product preparation process.

Post-Conditions:	New issued (white) product in WWA Monitor, public dissemination of product.
	Page 1 of 1

3.1.3.   **Time extension of an issued single segmented product**

Pre-Conditions:	• Issued (white) product for follow-up in WWA Monitor • No product/segment highlighted in WWA Monitor
Event Course:	**Time extension of an issued single segmented product**

1) Highlight issued product in the WWA Monitor.

2) Select *Followup...* from the WWA Monitor to launch the Composer interface.

3) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer.

4) Select the *Overview/Synopsis* and/or *Descriptive* text buttons to enter free text (product dependent).

5) Select any *Optional Bullets* from the Composer.

6) Select *Transmit* from the Composer to display transmit interface.

7) Evaluate the final product, then select *Yes* to disseminate.
    • Select *No* and return to product preparation process.

Post-Conditions:	New issued (white) product in WWA Monitor, public dissemination of product.
	Page 1 of 1

3.1.4.   **Areal expansion of an issued WWA product**

Pre-Conditions:	• Issued (white) product for follow-up in WWA Monitor • No product/segment highlighted in WWA Monitor
Event Course:	**Areal expansion of an issued WWA product**

1) Highlight issued product in the WWA Monitor.

2) Select *Followup...* from the WWA Monitor to launch the Composer interface.

3) Select new zone or county in WWA Geo-Viewer

3) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer.

4) Select the *Overview/Synopsis* and/or *Descriptive* text buttons to enter free text (product dependent).

5) Select any *Optional Bullets* from the Composer.

6) Select *Transmit* from the Composer to display transmit interface.

7) Evaluate the final product, then select *Yes* to disseminate.
   • Select *No* and return to product preparation process.

Post-Conditions:	New issued (white) product in WWA Monitor, public dissemination of product.
	Page 1 of 1

3.1.5.   **Cancel an issued WWA product**

Pre-Conditions:	• Issued (white) product in WWA Monitor • No product/segment highlighted in WWA Monitor
Event Course:	**Cancel an issued WWA product**
1) Highlight issued product in the WWA Monitor. **2) Select _Cancel..._ from the WWA Monitor to launch the Composer interface.** **3) Adjust _Expires_, and _ProdExp_ time fields in the WWA Composer if 1 hour default not desired** **4) Select _Transmit_ from the Composer to display transmit interface.** **5) Evaluate the final product, then select _Yes_ to disseminate.** **• Select _No_ and return to product preparation process.**	
Post-Conditions:	New issued (white) product in WWA Monitor, public dissemination of product.
	Page 1 of 1

3.1.6.   **Clearing a zone/county from an issued WWA product**

Pre-Conditions:	• Issued (white) product in WWA Monitor • No product/segment highlighted in WWA Monitor
Event Course:	**Clear a zone/county from an issued WWA product**

1) Highlight issued product in the WWA Monitor.

2) Select *Clear...* from the WWA Monitor to launch the Composer interface.

3) Select zone or county on WWA Geo-Viewer to clear from product.

4) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer.

5) Select the *Overview/Synopsis* and/or *Descriptive* text buttons to enter free text for cleared counties (product dependent).

6) Select any *Optional Bullets* from the Composer.

7) Select *Transmit* from the Composer to display transmit interface.

8) A "virtual" segment window will display to enter the descriptive text for the counties that remain in original hazard.

9) Evaluate the final product, then select *Yes* to disseminate.
   • Select *No* and return to product preparation process.

Post-Conditions:	New issued (white) product in WWA Monitor, public dissemination of product.
	Page 1 of 1

3.1.7.   **Upgrade a WSW/NPW watch: upgrade function active**

Pre-Conditions:	• Issued (white) product in WWA Monitor • Upgrade function active • No product/segment highlighted in WWA Monitor
Event Course:	**Upgrade WSW/NPW from a watch: upgrade function active**

1) Select *New...* from the WWA Monitor to launch the Composer interface.

2) Select the correct hazard upgrade for issued watch from the Composer hazard menu.

3) Select the geographical area of hazard that overlaps current watch on the WWA Geo-Viewer.

4) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer.

5) Select the *Overview/Synopsis* and/or *Descriptive* text buttons to enter free text (product dependent).

6) Select any *Optional Bullets* from the Composer.

7) Select *Transmit* from the WWA Monitor to display transmit interface.

8) Select *Yes* when prompted to acknowledge if this is an upgrade to the existing watch.

9) A "virtual" segment window will display with the original watch (for remaining counties) text, tweak text accordingly and select Save & Close.
   • **Text changes optional, select Cancel to exit with out saving changes.**

10) Evaluate the final product, then select *Yes* to disseminate.
   • **Select *No* and return to product preparation process.**

Post-Conditions:	New issued (white) product in WWA Monitor, public dissemination of product.
	Page 1 of 1

3.1.8.   **Upgrade a WSW/NPW watch: upgrade function inactive**

Pre-Conditions:	• Issued (white) product in WWA Monitor • Upgrade function inactive • No product/segment highlighted in WWA Monitor
Event Course:	**Upgrade WSW/NPW from a watch: upgrade function inactive**

1) In the WWA Monitor highlight the issued (white) watch.

2) Select *Clear...* from the WWA Monitor to launch the Composer interface.

3) Deselect zones or counties in the GeoViewer being upgraded, to cancel them from watch.

4) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer as needed.

5) Select the *Overview/Synopsis* and/or *Descriptive* text buttons to enter free text (product dependent).

6) Select the *Save Only...* button on the WWA Composer.

7) Select the *New...* button from the WWA Monitor to generate an upgrade segment.

8) Select the upgraded *Hazard* type from the WWA Composer pull down menu.

9) Select geographical area of hazard on WWA Geo-Viewer.

10) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer.

11) Select the *Overview/Synopsis* and/or *Descriptive* text buttons to enter free text (product dependent).

12) Select any *Optional Bullets* from the Composer.

13) Select the *Save Only...* button on the WWA Composer.

14) Repeat steps 8 through 13 for each hazard upgrade.

15) Close the WWA Composer by selecting the *Close* button located on the bottom right of interface.

16) Select all generated segments (tan) from the WWA Monitor, including the first cleared one.

17) Select *Transmit* from the WWA Monitor to display transmit interface.

18) A "virtual" segment window will display to enter the descriptive text for the counties that remain in original watch.

19) Evaluate the final product, then select *Yes* to disseminate.

Post-Conditions:	New issued (white) product in WWA Monitor, public dissemination of product.
	Page 1 of 1

3.2. **Watch By County / Watch County Notification product generation**

3.2.1. **Create a WCN with *No* other active watch**

Pre-Conditions:	• SPC Issued WOU • No other active watch • Format active
Event Course:	**Create a WCN with *No* other active watch**

1) **In the provided, edit enabled, text editor on the Text Workstation complete the AWIPS Header Block information (ie CCCWCNXXX, DEF) and select the *enter* button.**
   • **If not automatically displayed on the Text Workstation defined in enter *WRKWG#* (where # is the defined workstation) into the entry box to the right of *AFOS_Cmd* on the XT text editor, select *Enter* on the keyboard, then *Enter Editor* button to edit.**

2) **Select the *Send* button on the Text Workstation**
   • **Note: Do not edit the UGC line. If an extra county is in the WCN product or a county is missing or the purge time is incorrect, you must start over! If WWA is configured correctly there should be no reason to edit the generated WCN.**

Post-Conditions:	Generated WCN product issued (white) in WWA Monitor. Public dissemination of WCN product.
	Page 1 of 1

3.2.2.   **Clear geographical area from watch, *No* other active watch**

Pre-Conditions:	• No other active watch
Event Course:	**Clear geographical area from watch, *No* other active watch**

1) **Select the issued (white) WCN watch in the WWA - Monitor.**

2) **Select the *Clear* button.**
   • **The "WWA Composer - Clear" window will open.**

3) **In the GeoViewer, select counties you wish to clear from the watch.**
   • **The counties that you are clearing will be highlighted in yellow while the counties that remain in the watch will continue to be highlighted in blue.**

4) **Select *Transmit* from the WWA Composer to display transmit interface.**

5) **Evaluate the final product, then select *Yes* to disseminate.**
   • **Select *No* and return to product preparation process.**

Post-Conditions:	Generated WCN product issued (white) in WWA Monitor. Public dissemination of WCN product.
	Page 1 of 1

3.2.3.   **Cancel an existing watch, *No* other active watch**

Pre-Conditions:	• No other active watch • Format active
Event Course:	**Cancel an existing watch, *No* other active watch**

1) **Highlight the issued (white) watch in the WWA Monitor.**

2) **Select the *Cancel* button.**
   • **The "WWA Composer - Cancel" window will open.**

3) **Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer as needed.**

4) **Select *Transmit* from the WWA Monitor to display transmit interface.**

5) **Evaluate the final product, then select *Yes* to disseminate.**
   • **Select *No* and return to product preparation process.**

Post-Conditions:	Generated WCN product issued (white) in WWA Monitor. Public dissemination of WCN product.
	Page 1 of 1

3.2.4.   **Create WCN no county overlap, one or more active watch**

Pre-Conditions:	• One or more active watch • Green unissued WCN in WWA-Monitor
Event Course:	**Create WCN no county overlap, one or more active watch**

1) Close the formatted/generated WCN product automatically displayed on the text workstation, created from SPC's new WOU.
   - **This will be in edit mode in the XT editor. If not open then skip this step.**

2) Highlight the active & issued WCN (white) product in the WWA Monitor and then select the *Follow-up* button.

3) Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer as needed.

4) Select the *Save Only* button on the WWA Composer.

5) Close the WWA composer by selecting the *Close* button.

6) Repeat steps 2 through 4 for all active watches in CWA.

7) Highlight the tan (follow-up WCN) and highlight the recently generated "green" (New SPC watch) product in the WWA Monitor and then select the *Transmit* button.
   - **Select all follow-up WCN segments (tan) in the case of more than one active watch to collect each segment.**

8) Evaluate the final product, then select *Yes* to disseminate.
   - **Select *No* and return to product preparation process.**

Post-Conditions:	Generated WCN product issued (white) in WWA Monitor. Public dissemination of WCN product.
	Page 1 of 1

3.2.5. **Create a new watch, with one or more active watch, and *with* county overlap**

Pre-Conditions:	• SPC issued WOU • One or more active watch • Format active
Event Course:	**Create a new watch, with one or more active watch and with county overlap**

1) **Close the formatted/generated WCN product automatically displayed on the text workstation, created from SPC's new WOU.**
   - **This will be in edit mode in the XT editor. If not open then skip this step.**

2) **Highlight the active & issued WCN (white) product in the WWA Monitor and then select the *Clear* button.**
   - **WWA Composer will open. Adjust any times if necessary.**

3) **Deselect the overlapping counties from the WWA-GeoViewer.**

4) **Select the *Save Only* button on the WWA Composer.**

5) **Close the WWA composer by selecting the *Close* button.**
   - **Product should change color from white to tan.**

6) **Repeat steps 2 through 4 for all active watches in CWA.**

7) **Highlight the tan (cleared WCN) and highlight the recently generated "green" (New SPC watch) product in the WWA Monitor and then select the *Transmit* button.**
   - **Select all cleared WCN segments (tan) in the case of more than one active watch to collect each segment.**

8) **Evaluate the final product, then select *Yes* to disseminate.**
   - **Select *No* and return to product preparation process.**

Post-Conditions:	Generated WCN product issued (white) in WWA Monitor. Public dissemination of WCN product.
	Page 1 of 1

3.2.6.   **Clear a portion of the watch, with one or more active watch, and with county overlap**

Pre-Conditions:	• One or more active watch
Event Course:	**Clear a portion of the watch, with one or more active watch, and with county overlap**

1) **Highlight the issued (white) watch in the WWA Monitor.**

2) **Select the *Clear* button.**

3) **Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer as needed.**

4) **In the GeoViewer, select the counties you wish to clear from the watch.**
   - **Counties that you are clearing will be highlighted while the counties that remain in the watch will continue to be highlighted in blue.**

5) **In the WWA Composer select the *Save Only* button and close the Composer .**

6) **Select the existing watch (white) in the WWA Monitor.**
   - **Any watch that has not been cleared via the five preceding steps.**

7) **Click on the *Follow-up* button on the WWA Monitor.**

8) **Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer as needed.**

9) **Select the *Save Only* button and close the Composer window.**

10) **Repeat steps 6 through 8 for each remaining & issued watch that you want part of the new product.**

11) **Highlight the unissued cleared watch and the other unissued followed up watches in the WWA Monitor.**

12) **Select the *Transmit* button on the WWA Monitor**

13) **Evaluate the final product, then select *Yes* to disseminate.**
   - **Select *No* and return to product preparation process.**

Post-Conditions:	Issued (white) WCN in WWA Monitor. Public dissemination of WCN product.
	Page 1 of 1

3.2.7.   **Cancel a watch with one or more active watch**

Pre-Conditions:	• One or more active watch
Event Course:	**Cancel a watch with one or more active watch**

1) **In the WWA Monitor, select the issued watch (white) to be canceled.**

2) **Select the *Cancel* button from the WWA Monitor**

3) **Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer as needed.**

4) **In the WWA Composer select the *Save Only* button and close the Composer interface.**

6) **Select the existing watch (white) in the WWA Monitor**
    • Any watch that has not been cancelled via the five preceding steps.

7) **Click on the *Follow-up* button in the WWA Monitor**

8) **Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer as needed.**

9) **Select the *Save Only* button and close the Composer window.**

10) **Repeat steps 6 through 8 for each remaining & issued watch that you want part of the new product.**

11) **Highlight the unissued cancelled watch and the other unissued followed up watches in the WWA Monitor.**

12) **Select the *Transmit* button from the WWA Monitor.**

13) **Evaluate the final product, then select *Yes* to disseminate.**
      • Select *No* and return to product preparation process.

Post-Conditions:	Issued (white) WCN in WWA Monitor. Public dissemination of WCN product.
	Page 1 of 1

3.2.8.   **Cancel multiple watches with one or more active watch**

Pre-Conditions:	• One or more active watch
Event Course:	**Cancel multiple watches**

1) **In the WWA Monitor, select the issued watch (white) to be canceled.**

2) **Select the *Cancel* button from the WWA Monitor**

3) **Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer as needed.**

4) **In the WWA Composer select the *Save Only* button and close the Composer interface.**

6) **Repeat steps 1 through 4 until all the watches you want to cancel have been saved to the WWA Monitor.**

7) **Select the existing watch in the WWA Monitor**
   • Any watch that has not been cancelled via the six preceding steps.

8) **Select the *Follow-up* button in the WWA Monitor**

9) **Adjust *Begins*, *Expires*, and *ProdExp* time fields in the WWA Composer as needed.**

10) **Select the *Save Only* button and close the Composer window.**

11) **Repeat steps 7 through 10 for each remaining issued watch that you want to be a part of the product.**

12) **Highlight the unissued cancelled watch and the other unissued followed up watches in the WWA Monitor.**

13) **Select the *Transmit* button from the WWA Monitor.**

14) **Evaluate the final product, then select *Yes* to disseminate.**
   • Select *No* and return to product preparation process.

Post-Conditions:	Issued (white) WCN in WWA Monitor. Public dissemination of WCN product.
	Page 1 of 1

3.3.   Running WWA in Backup Mode

Launch WWA on lx1 or lx2 in back up mode:

```
1. Open an xterm window on either lx1 or lx2
      - if done as awipsusr go to step 3

2.  Login as user awipsusr:
      su -l awipsusr
      <enter awipsusr password when prompted>

3. Launch the WWA application as backup site by typing:
      wwa.bat -s CCC               ◄◄ Where CCC is uppercase backup site id
```

Launch WWA on HP workstations in back up mode:

```
1. Open an xterm window on an HP
      - if done as awipsusr go to step 3

2. Login as user awipsusr:
      su -l awipsusr
      <enter awipsusr password when prompted>

3. Remotely log into lx1 or lx2
      ssh -l awipsusr <loc>           ◄◄ Where loc is IP address of lx1 or
                                         lx2 or alias such as lx1-pqr

4. Launch WWA program as desired backup site:
      wwa.bat -s CCC               ◄◄ Where CCC is uppercase backup site id
```


4.   REFERENCES

4.1.   Troubleshooting Tips

4.1.1.   Transmitting Error Message *"A WWA product transmit currently pending. Please try again later"*

An error checking routine was built into this version of WWA associated with the transmit that prohibits multiple transmit windows from being activate at the same time from any WWA application regardless of the workstation. This function was added to protect WWA database integrity.   If this message is displayed and no other WWA application is running with an active transmit window on any workstation and you're sure an error has occurred it is possible to override this transmission block by following these steps:

```
1. Close transmit window and keep WWA running, open an xterm window on lx1
   or lx2.

2. Login as user awips (if session not already awipsusr):
         su -l awips
         <enter password when prompted>

3. Remove all files named wwaSendProd_<date>.txt by typing:
         rm /data/adapt/ifps/products/TEXT/wwaSendProd_*.txt
```

```
4. Close xterm window:
        exit
```

5. *Select *transmit* button on WWA composer and continue with transmit process.

<center>* If block is still active contact NCF for assistance.</center>

4.1.2.   WWA headline editor will not open correctly

On very random occasions the headline editor was observed to open incorrectly, smaller than the example shown in section 1.1.4. When this happens forecasters will need resize the editor by selecting & holding the left mouse button on the bottom right corner of the window and then dragging the window to an acceptable size.

4.1.3.   Trouble editing HWO product fields

The approved HWO template file used to generate the hazardous weather outlook is incorrectly formatted. The fields:

.DAY ONE...

.DAYS TWO THROUGH SEVEN...

NO HAZARDOUS WEATHER IS EXPECTED AT THIS TIME.

.SPOTTER INFORMATION STATEMENT...

are defined in the hazard headline section of the template file. Because of this placement sites will first need activate the headline editor option to edit the described fields or change customize the national template file and redefine these fields to be included at the time of product generation by using the descriptive text free text editor.

4.2.   MDL Contact Information

MDL Customer Service:

Iris Boon
(301) 713-0224 extension 145
Iris.Boon@noaa.gov
1325 East West Highway (OST23-10310)
Silver Spring, Maryland 20910

WWA Project Manager:

Mark McInerney
(301) 713-1774 extension 180
Mark.Mcinerney@noaa.gov
1325 East West Highway (OST23-10344)
Silver Spring, Maryland 20910

4.3.   Additional and Related Material

- Meteorological Development Laboratory (MDL) Documents:
  Decision Assistance Branch Web Page: http://www.nws.noaa.gov/mdl/dab/decisionassistbr.htm
  WWA Web page: http://www.nws.noaa.gov/mdl/wwa

- WWA OB2 Documents:
  Self-contained Design Doc: http://www.nws.noaa.gov/mdl/wwa/docs/SelfContainedWWA.pdf
  WWA Admin Design Doc: http://www.nws.noaa.gov/mdl/wwa/docs/WWAAdminDesign.PDF
  WWA Admin Interface Doc: http://www.nws.noaa.gov/mdl/wwa/docs/WWAAdminMockUp.pdf
  Hazard Menu List: http://www.nws.noaa.gov/mdl/wwa/docs/WWA-OB2-000-PRODSUM.pdf
  New in OB2 Doc: http://www.nws.noaa.gov/mdl/wwa/docs/WWA-OB2-000-NEW.pdf
  Release notes: http://www.nws.noaa.gov/mdl/wwa/docs/WWA_OB2-000-Release.pdf
  WWA Admin Users Manual: http://www.nws.noaa.gov/mdl/wwa/docs/WWA-OB2-000-Admin.pdf

- Office of Climate, Water, & Weather Services (OCWWS) Documents:
  VTEC: http://www.nws.noaa.gov/om/vtec/index.shtml
  WCN format requirements: http://www.nws.noaa.gov/mdl/wwa/docs/WBCFormatReqFinal.pdf
  Upgrade/Downgrade requirement: http://www.nws.noaa.gov/mdl/wwa/docs/WWAupgradedowngradever2.pdf
  Headline Time Phrase requirement: http://www.nws.noaa.gov/mdl/wwa/docs/WWAHeadlineTimePhrase.pdf
  Zone/County Name requirement: http://www.nws.noaa.gov/mdl/wwa/zone_county_names.pdf

- Linux Reference:
  Pico Editor: http://www.uic.edu/depts/accc/software/pine/pico.html

- AWIPS System References:
  Data Management: http://www.nws.noaa.gov/datamgmt/index.html
  a2a Cross Reference: http://www.nws.noaa.gov/datamgmt/a2a/a2a.html

Appendix A

This appendix serves as a reference to key locations parsed in the SPC WCL product, by the WWA WCL ingest routine. The fields highlighted in figure 14 are searched to gather information by this routine and if missing or outside the expected format will cause the process to malfunction. This has been coordinated through the development process between SPC and MDL.

NWUS64 KWNS 261705
WCLA

❶.TORNADO WATCH A
COORDINATION COUNTY LIST FROM THE NWS STORM PREDICTION
CENTER EFFECTIVE UNTIL ❷0100 UTC.

❸ARC013-019-025-027-029-033-039-045-047-051-053-057-059-061-073-081-
083-085-091-097-099-103-105-109-113-115-119-125-127-131-133-139-149-
270100-

AR
.   ARKANSAS COUNTIES INCLUDED ARE

BRADLEY	CALHOUN	CLARK
CLEVELAND	COLUMBIA	CONWAY
DALLAS	FAULKNER	GARLAND
GRANT	HEMPSTEAD	HOT SPRING
HOWARD	JEFFERSON	LAFAYETTE
LITTLE RIVER	LOGAN	LONOKE
MILLER	MONTGOMERY	NEVADA
OUACHITA	PERRY	PIKE
POLK	PULASKI	SALINE
SCOTT	SEBASTIAN	SEVIER
UNION	WHITE	YELL

$$

❸LAC013-015-017-027-031-081-119-270100-

LA
.   LOUISIANA PARISHES INCLUDED ARE

BIENVILLE	BOSSIER	CADDO
CLAIBORNE	LINCOLN	UNION
WEBSTER		

$$

❸TXC037-063-067-183-203-315-365-459-270100-

TX
.   TEXAS COUNTIES INCLUDED ARE

BOWIE	CAMP	CASS
HARRISON	MARION	MORRIS
UPSHUR		

$$

❹ATTN...WFO...SHV...FTW...LZK...

❶ **TORNADO WATCH A or SEVERE THUNDERSTORM WATCH A**- are searched to determine the watch type.
  - The letter, "A" in this example can range from A
    to J, but must be there for the ingest routines to
    work correctly.

❷ **UTC Time** - Must be future time.

❸ **UGC & Expiration Field** - UGC data for offices defined in section 2.1. #6.
  - This information is broken down by state as
    shown in the example.
  - The expiration time/date must be later than
    the issuance time/date, #3 of this figure.
  - The UGC format expected is:
      - Two char state id
      - Followed by a C for county
      - Followed by a numeric list of county
        codes
  - The Time/Date format expected is:
      - Two digit numeric day
      - Followed by four digit numeric time
        field
      - Always ending with a dash, "-"
      - or ddhhmm-

❹ **ATTN...WFO...** - followed by at least one WFO site id.

Figure 14 - SPC WCL product example with highlighted WWA key locations.

Appendix B

This appendix serves as a reference to key locations parsed in the SPC WOU product, by the WWA WOU ingest routine. The fields highlighted in figure 15 are searched to gather information by this routine and if missing or outside the expected format will cause the process to malfunction. This has been coordinated through the development process between SPC and MDL.

WOUS64 KWNS 261750
WOU1

❶TORNADO WATCH OUTLINE UPDATE FOR ❷WT 1002
NWS STORM PREDICTION CENTER NORMAN OK
❸1250 PM CDT SUN MAY 26 2001

TORNADO WATCH 1002 IS IN EFFECT UNTIL 8:00 PM CDT FOR THE FOLLOWING LOCATIONS:

❹ARC013-019-025-027-029-033-039-045-047-051-053-057-059-061-073-081-083-085-091-097-099-103-105-109-113-115-119-125-127-131-133-139-149-270100-

AR
.   ARKANSAS COUNTIES INCLUDED ARE

CALHOUN	CLARK	CLEVELAND
COLUMBIA	CONWAY	CRAWFORD
DALLAS	FAULKNER	FRANKLIN
GARLAND	GRANT	HEMPSTEAD
HOT SPRING	HOWARD	LAFAYETTE
LITTLE RIVER	LOGAN	LONOKE
MILLER	MONTGOMERY	NEVADA
OUACHITA	PERRY	PIKE
POLK	POPE	PULASKI
SALINE	SCOTT	SEBASTIAN
SEVIER	UNION	YELL

$$

❹LAC013-015-017-027-031-081-119-270100-

LA
.   LOUSIANA PARISHES INCLUDED ARE

BIENVILLE	BOSSIER	CADDO
CLAIBORNE	DE SOTO	RED RIVER
WEBSTER		

$$

❹TXC037-063-067-183-203-315-365-459-270100-

TX
.   TEXAS COUNTIES INCLUDED ARE

BOWIE	CAMP	CASS
GREGG	HARRISON	MARION
MORRIS	PAYOLA	UPSHUR

$$

❺ATTN...WFO...SHV...FTW...LZK...

---

❶ **TORNADO or SEVERE THUNDERSTORM** - are searched to determine the watch type.

❷ **WT # or WS #** - are searched for to retrieve the SPC managed watch number used in the WCN product which also includes the VTEC ETN.

❸ **Time/Date Line** - Must be current and be an earlier time than found in the expiration field, #4 in this figure.

❹ **UGC & Expiration Fields** - UGC data for offices defined in section 2.1. #6.
- This information is broken down by state as shown in the example.
- The expiration time/date must be later than the issuance time/date, #4 in this figure.
- The UGC format expected is:
  - Two char state id
  - Followed by a C for county
  - Followed by a numeric list of county codes
- The Time/Date format expected is:
  - Two digit numeric day
  - Followed by four digit numeric time field
  - Always ending with a dash, "-"
  - or *ddhhmm*-

❺ **ATTN...WFO...** - followed by at least one WFO site id.

Figure 15 - SPC WOU product example with highlighted WWA key locations.

This appendix provides a WMO header reference to determine the correct WMO ID when defining locally testing the WCL & WOU interactions with WWA. Checking updates to this information can be done by referencing: http://www.nws.noaa.gov/datamgmt/a2a/a2a.html

```
ABQWCNABQ WWUS65 KABQ      GTFWCNGTF WWUS65 KTFX      PHXWCNFGZ WWUS65 KFGZ
ALBWCNALY WWUS61 KALY      GTFWCNMSO WWUS65 KMSO      PHXWCNPHX WWUS65 KPSR
ALBWCNBGM WWUS61 KBGM      GTFWCNTFX WWUS65 KTFX      PHXWCNPSR WWUS65 KPSR
ALBWCNBTV WWUS61 KBTV      HUNWCNHUN WWUS64 KHUN      PHXWCNTWC WWUS65 KTWC
ARBWCNAPN WWUS63 KAPX      INDWCNFWA WWUS63 KIWX      PITWCNPBZ WWUS61 KPBZ
ARBWCNAPX WWUS63 KAPX      INDWCNIND WWUS63 KIND      PWMWCNCAR WWUS61 KCAR
ARBWCNDTX WWUS63 KDTX      JANWCNJAN WWUS64 KJAN      PWMWCNGYX WWUS61 KGYX
ARBWCNGRR WWUS63 KGRR      LAXWCNLAX WWUS66 KLOX      RDUWCNILM WWUS62 KILM
ATLWCNATL WWUS62 KFFC      LAXWCNLOX WWUS66 KLOX      RDUWCNMHX WWUS62 KMHX
BHMWCNBHM WWUS64 KBMX      LAXWCNSGX WWUS66 KSGX      RDUWCNRAH WWUS62 KRAH
BISWCNBIS WWUS63 KBIS      LBBWCNAMA WWUS64 KAMA      RNOWCNLKN WWUS65 KLKN
BISWCNFAR WWUS63 KFGF      LBBWCNEPZ WWUS64 KEPZ      RNOWCNREV WWUS65 KREV
BISWCNFGF WWUS63 KFGF      LBBWCNLBB WWUS64 KLUB      RNOWCNRNO WWUS65 KREV
BISWCNISN WWUS63 KBIS      LBBWCNMAF WWUS64 KMAF      RNOWCNVEF WWUS65 KVEF
BOIWCNBOI WWUS65 KBOI      LBBWCNSJT WWUS64 KSJT      SATWCNCRP WWUS64 KCRP
BOIWCNPIH WWUS65 KPIH      LITWCNLIT WWUS64 KLZK      SATWCNHGX WWUS64 KHGX
BOSWCNBOX WWUS61 KBOX      MEMWCNOHX WWUS64 KOHX      SDFWCNJKL WWUS63 KJKL
BUFWCNBUF WWUS61 KBUF      MIAWCNEYW WWUS62 KEYW      SDFWCNPAH WWUS63 KPAH
CAEWCNCAE WWUS62 KCAE      MIAWCNJAX WWUS62 KJAX      SDFWCNSDF WWUS63 KLMK
CAEWCNCHS WWUS62 KCHS      MIAWCNTAE WWUS62 KTAE      SEAWCNOTX WWUS66 KOTX
CAEWCNGSP WWUS62 KGSP      MIAWCNTBW WWUS62 KTBW      SEAWCNSEA WWUS66 KSEW
CHIWCNCHI WWUS63 KLOT      MKEWCNARX WWUS63 KARX      SEAWCNSEW WWUS66 KSEW
CHIWCNDVN WWUS63 KDVN      MKEWCNGRB WWUS63 KGRB      SFOWCNEKA WWUS66 KEKA
CHIWCNILX WWUS63 KILX      MKEWCNLSE WWUS63 KARX      SFOWCNHNX WWUS66 KHNX
CLEWCNCLE WWUS61 KCLE      MKEWCNMKE WWUS63 KMKX      SFOWCNSFO WWUS66 KMTR
CLEWCNILN WWUS61 KILN      MSPWCNDLH WWUS63 KDLH      SFOWCNSTO WWUS66 KSTO
CRWWCNRLX WWUS61 KRLX      MSPWCNRST WWUS63 KMPX      SJUWCNSJU WWCA62 TJSJ
CYSWCNCYS WWUS65 KCYS      NYCWCNOKX WWUS61 KOKX      SLCWCNSLC WWUS65 KSLC
CYSWCNRIW WWUS65 KRIW      OKCWCNOKC WWUS64 KOUN      STLWCNEAX WWUS63 KEAX
DENWCNDEN WWUS65 KBOU      OKCWCNTSA WWUS64 KTSA      STLWCNMCI WWUS63 KEAX
DENWCNGJT WWUS65 KGJT      OMAWCNGID WWUS63 KGID      STLWCNSGF WWUS63 KSGF
DENWCNPUB WWUS65 KPUB      OMAWCNGRI WWUS63 KGID      STLWCNSTL WWUS63 KLSX
DSMWCNALO WWUS63 KDMX      OMAWCNLBF WWUS63 KLBF      TOPWCNDDC WWUS63 KDDC
FSDWCNABR WWUS63 KABR      OMAWCNOMA WWUS63 KOAX      TOPWCNGLD WWUS63 KGLD
FSDWCNFSD WWUS63 KFSD      PDXWCNPDT WWUS66 KPDT      TOPWCNICT WWUS63 KICT
FSDWCNRAP WWUS63 KUNR      PDXWCNPDX WWUS66 KPQR      TOPWCNTOP WWUS63 KTOP
FTWWCNFTW WWUS64 KFWD      PDXWCNPQR WWUS66 KPQR      WBCWCNAKQ WWUS61 KAKQ
GTFWCNBYZ WWUS65 KBYZ      PHLWCNCTP WWUS61 KCTP      WBCWCNLWX WWUS61 KLWX
GTFWCNGGW WWUS65 KGGW      PHLWCNPHI WWUS61 KPHI       WBCWCNRNK WWUS61 KRN
```

Figure 16 - WCN AWIPS afos2awips.txt reference (WCN products only)